

T.C  
YEDİTEPE UNIVERSITY  
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**INVESTIGATION OF THE RELATIONSHIP  
BETWEEN SOCIAL MEDIA ADDICTION AND  
OBESITY AND BODY PERCEPTION IN  
UNIVERSITY STUDENTS**

MASTER THESIS

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## APPROVAL

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### ONAY


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Sağlık Bilimleri Enstitüsü Müdürü

## DECLARATION

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree except where due acknowledgment has been made in the text.

24.02.2020



Seda ÇAKMAK

## DEDICATION

I would like to express my gratitude to everyone who has been the driving force for me in this process which is a long and stressful adventure. I would like to thank my mother Ayşe Çakmak, my father Nuri Çakmak, my sister Sibel Çakmak and my brother Mehmet Çakmak. I also thank to my dear friend Hasan Kaan Kavşara; who has encouraged me all the way and whose words has made me sure that I give it all it takes to finish that which I have started. My love for you all can never be quantified.

I dedicate my thesis work to my family and my friends.

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## **LIST OF SYMBOLS AND ABBREVIATIONS**

BMI	Body Mass Index
WHO	World Health Organization
TSI	Turkey Statistical Institute
WC	Waist Circumference
MONICA	Monitoring and Trends and Determinants in Cardiovascular Diseases
NHANES	Third National Health and Nutrition Examination Survey
TURDEP Prevalence	Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases
OECD	Economic Cooperation and Development
T2DM	Type 2 Diabetes Mellitus
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders
SMAS	Social Media Addiction Scale
BPS	Body Perception Scale
EE	Emotional Eating

## ABSTRACT

**Çakmak, Seda. (2020). Investigation of the Relationship between Social Media Addiction and Obesity and Body Perception in University Students. Yeditepe University Institute of Health Sciences, Department of Nutrition and Dietetics, Msc thesis, İstanbul.**

The use of social media platforms, which are rapidly becoming widespread and indispensable in daily life, has the same risks as well as positive effects. Uncontrolled and excessive use of social media can lead to health problems such as obesity in youth, which is a critical period, and negatively affect body perception. This thesis was conducted with 248 students who are students of Yeditepe University in Kayışdağı district of İstanbul province in order to investigate the relationship between obesity and body perception of social media addiction among university students. Social Media Addiction Scale was used to measure social media addiction, Body Perception Scale was used to determine body perception, and Body Mass Index (BMI) ( $\text{kg} / \text{m}^2$ ) was used to determine obesity status. Data were collected using a structured questionnaire including sociodemographic information, lifestyle, and eating habits. There was a significant relationship between social media addiction and body perception. As a result of the study, it was determined that social media addiction varies according to the year of use of social media, alcohol use, meal skipping and frequency of fast food consumption. It was found that the sub-dimensions of the social media addiction scale differed according to exercise and having psychological disease. There was a significant relationship between fast food consumption frequency and body perception. BMI differed according to the presence of obese individuals in the family. In conclusion, social media addiction can cause obesity risk factors to develop and impair body perception.

**Anahtar Kelimeler:** Social Media, Addiction, Obesity, Body Perception

## ÖZET (TÜRKÇE)

**Çakmak, Seda. (2020). Üniversite Öğrencilerinde Sosyal Medya Bağımlılığının Obezite ve Beden Algısı ile İlişkisinin İncelenmesi. Yeditepe Üniversitesi, Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik ABD, Master Tezi. İstanbul.**

Hızla yaygınlaşan ve günlük yaşamın vazgeçilmezi olan sosyal medya platformlarının kullanımı olumlu etkilerle beraber aynı oranda risklere de sahiptir. Sosyal medyanın kontrolsüz ve aşırı kullanımı kritik bir dönem olan gençlikte obezite gibi sağlık sorunlarına yol açabileceği gibi beden algısını da olumsuz yönde etkileyebilir. Bu tez üniversite öğrencilerinde sosyal medya bağımlılığının obezite ve beden algısı ile ilişkisini incelemek amacıyla, İstanbul İli Kayışdağı ilçesindeki Yeditepe Üniversitesi öğrencisi olan ve sosyal medya kullanan 248 öğrenci ile gerçekleştirilmiştir. Sosyal medya bağımlılığını ölçmek için Sosyal Medya Bağımlılığı Ölçeği, beden algısını belirlemek için Beden Algısı Ölçeği kullanılmış ve obezite durumunu saptamak için Beden Kütle İndeksi (BKİ )(kg/m<sup>2</sup>) bakılarak gerçekleştirilmiştir. Veriler sosyodemografik bilgileri, yaşam tarzı ve beslenme alışkanlıklarını içeren yapılandırılmış bir anket formu kullanılarak toplanmıştır. Çalışma sonucunda sosyal medya bağımlılığının sosyal medyayı kullanım yılına, alkol kullanımına, öğün atlamaya ve fast food tüketim sıklığına göre farklılık gösterdiği belirlenmiştir. Sosyal medya bağımlılığı ölçeğinin alt boyutlarının egzersiz yapma, psikolojik hastalığa sahip olma durumuna göre farklılıklar gösterdiği bulunmuştur. Fast food tüketim sıklığı ve beden algısı arasında anlamlı bir ilişki bulunmuştur. BKİ ise ailede obez birey bulunma durumuna göre farklılık göstermiştir. Sonuç olarak, sosyal medya bağımlılığı obezite risk faktörlerini gelişmesine ve beden algısının bozulmasına neden olabilir.

**Anahtar Kelimeler:** Sosyal Medya, Bağımlılık, Obezite, Beden Algısı

## 1. INTRODUCTION AND PURPOSE

The Internet, which has influenced people all over the world and is very easy to access; has been one of the most important discoveries in the last century (1). In our age, access to information is seen as an indispensable condition for achieving individual and social success and supporting development and progress. The Internet, which contains an accumulation of knowledge that is difficult to imagine, attracts people with its knowledge and quick access as well as facilitating communication (2). The dissemination of this information to the society is easily achieved through mass media (television, radio, internet, telephone, etc.) (1, 2).

While technology facilitates human life and contributes positively to the development of society, it also brings some problems and dangers arising from the unconscious use of the internet. Because while the internet frees man, on the other hand, it can become a tool that takes its freedom and transforms it into dependent beings (2). Interest in social media, an extension of internet technology, is increasing and used extensively. It is emphasized that addiction of social media increasing in the world and Turkey (3).

Today's research demonstrates that young people use social media to a large extent (3–5). Studies emphasize that these uses are excessive. In a study conducted on 271 students between the ages of 13-19, social media addiction status of young people was investigated. It has been stated that the level of social media dependence increases with the daily time spent on the internet and the frequency of visits to social media profiles (3). In another study conducted with 23,532 people in Norway to examine the relationship between social media use, narcissism and self-esteem, it was found that being a woman, being a student, low education and low income levels were associated with low self-perception, narcissism and social media addiction (6).

In the literature, some problems have been reported that directly affecting daily life due to the use of social media, including few and poor sleep, desire to spend more time on the internet, desire to be online, excessive mental action, repeated thoughts about monitoring or limiting use and failure to prevent access (6).

It is known that technology leads to lack of activity and mobility. It is thought that long-term and frequent internet use causes psychopathological problems in adolescents and sedentary life style caused by addiction will affect nutritional problems and obesity (7).

Obesity and depression, known as adult diseases, have recently spread rapidly in children and adolescents, adversely affecting public health (8). According to the 2016 data provided by the World Health Organization (WHO), there are more than 650 million obese people and more than 1.9 billion overweight individuals aged 18 and over. More than 340 million children and adolescents between the ages of 5 and 19 are said to be overweight or obese (9). It is reported that 16.9% of children and adolescents are obese in the United States and 25-30% of the 11-15 age group in Europe are slightly obese (10). Turkey Statistical Institute (TSI), according to 2016 data 19.6% of the total population aged 15 years and older are obese, 34.3% were found to be overweight (11).

Adolescence, which is a transition period, includes the period from the onset of puberty to young adulthood. This period is one of the processes in which young people acquire many new qualities and habits, and also face many problems and behaviors that will put health risk at the most (8). Authorities in public health protection evaluate adolescent obesity more physiologically and neglect the psychosocial dimension of obesity. Obesity in this period causes various short and long term psychological and physiological problems (lack of self-confidence, anxiety, type 2 diabetes, hypertension, polycystic ovary syndrome , hyperlipidemia, asthma and sleep apnea) (12).

Social media is a media tool that affects body image. In a study, there was a significant relationship between the number of Facebook friends and the person's feeling well; in fact, it was seen that the comments made by Facebook friends on the photographs in the person's profile increased the self-confidence of the individual (13). Although the effects of media, family and close friends on body image have been studied, there are not many studies investigating the effect of social media on body image (14).

The aim of this study is to investigate the relationship between social media addiction and obesity formation and body perception. It is thought that internet users spend most of their time in social media applications. Internet and social media addiction is more common among young people and together with obesity is an important health problem for young



people and children, it is of great importance that clinicians know this problem adequately and take appropriate treatment approaches. It is thought that examining the relationship between social media addiction and obesity will be useful in the diagnosis and treatment of these diseases.



## 2. GENERAL INFORMATION

### 2.1. Definition and Classification of Obesity

The word obesity is derived from the Latin word 'obesus' which means "well-fed" or gourmand (15). WHO defines obesity as abnormal accumulation of fat in adipose tissues to the extent that it disrupts health (16).

Obesity is more than a simple weight problem. It is a chronic disease that can be seen in people of any age, regardless of whether they are children, young people, adults or the elderly and is a public health problem that arises as a result of the interaction of genetic, physiological, cultural and psychosocial factors (17).

Obesity develops due to the accumulation of excess fat in the body due to high and excess energy intake. Since it is not easy to define the percentage of body fat, obesity is defined as excess weight rather than excess fat (18).

Obesity; is a disorder of energy metabolism caused by unusual accumulation of fat in the body caused by the interaction of hereditary, environmental, developmental and behavioral factors that cause physical and psychological problems (19).

The definition and classification of obesity is evaluated according to Body Mass Index (BMI). The formula " $BMI = \text{Weight (kg)} / \text{Length (m}^2\text{)}$ " is calculated as body weight in kilograms divided by the height in meters squared (20). BMI is currently continued to be used for the classification of obesity but also there are different procedures, including Waist Circumference (WC) and central and peripheral fat mass. Underweight, normal and overweight, obesity and degrees in children and adolescents are evaluated differently according to the BMI of adults and these evaluations are shown in Table 1 (21).

**Table 2. 1. BMI of adults, youngs and children and these evaluations (21)**

<b>Groups</b>	<b>Adults (BMI, kg/m<sup>2</sup>)</b>	<b>Children and teens BMI-Z score (SD)</b>	<b>Children and teens (BMI-percentile)</b>
Underweight	<18.50	<-2.00 SD	<5%
Normal	18.5 – 24.99	-2.00 – 1.00 SD	≥5% to <85 %
Overweight	25.00 – 29.99	1.01 – 2.00 SD	≥ 85% to <95 %
Obese	≥30.00	>2.00 SD	≥ 95%
Class 1	30.00 – 34.99	-	100- 120% of the BMI corresponding to the 95th percentile
Class 2 (Severely obese)	35.00 – 39.99	-	120-140% of the BMI corresponding to 95th percentile
Class 3 (Morbidly obese)	40.00 – 49.99	-	> 140% of the BMI corresponding to the 95th percentile

BMI: Body mass index, SD: standard deviation.

## 2.2. Epidemiology of Obesity

Obesity has become an important public health problem on a global scale. Obesity is increasing day by day in both developed and developing countries. As it has serious effects in the short and long term, it is in the first step of public health agenda (22).

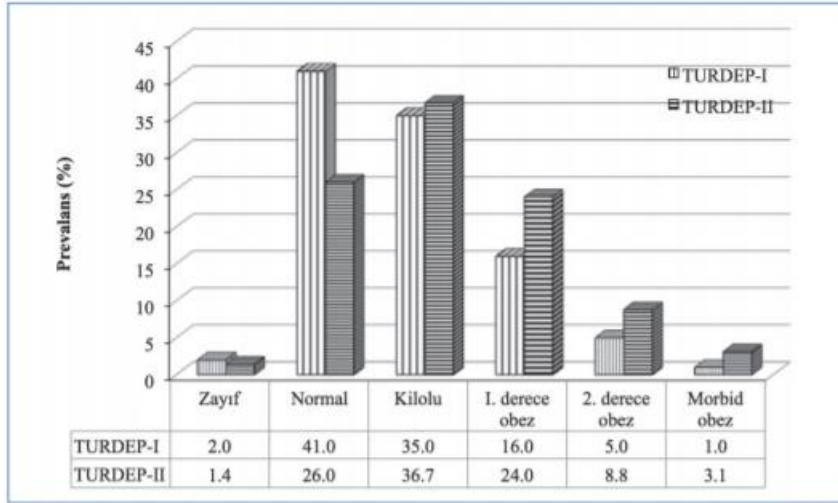
In the Monitoring and Trends and Determinants in Cardiovascular Diseases (MONICA) study conducted by WHO between 1980 and 1990 in various parts of Europe, Asia and Africa, the incidence of obesity increased by 10-30% compared to previous years. The prevalence of obesity in the world has more than doubled since the 1980s. In 2014, approximately 1.9 billion adults aged 18 and over were overweight, of which 600 million were obese (23). Obesity and overweight, which was seen as a problem in high income countries in the previous years, is now increasing in low and middle income countries (23).

According to data from the WHO, obesity has increased approximately three-fold worldwide since 1975. In 2016, more than 1.9 billion adults aged 18 and over were found to be overweight and more than 650 million of them were obese. 41 million children under the age of 5 were said to be overweight or obese. In 2016, it was reported that more than 340 million children aged 5-19 were overweight or obese (9).

According to the assessment of the Third National Health and Nutrition Examination Survey (NHANES III) in the United States of America (USA) (2011-2012); 34.9% of adults aged 20 years and over living in the USA and 16.9% of children and adolescents aged 2-19 years are obese. According to researchers' estimates, the prevalence of obesity in many states is expected to reach 50% by 2030 (18).

According to the results of Turkey Diabetes, Hypertension, Obesity and Endocrinology Diseases Prevalence Study-II (TURDEP-II Study) the prevalence of obesity has been found as 32%. According to the results of TURDEP I (1998) study, 26 499 people over 20 years of age participated in the study and it was found that obesity rate increased by 44% in our country in 12 years period (24).

In Turkey, changes between TURDEP-I to TURDEP-II distribution of BMI of adult population is shown in Figure 2. 1.



**Figure 2. 1. Distribution of BMI groups in adult society of Turkey at the TURDEP-I and TURDEP II studies (18)**

TURDEP-II obesity figures and the data of age and gender distribution which were collected by the 2016 Address Based Population Registration System (ABPRS) of Turkey Statistical Institute (TUIK) was standardized and it was found that 20 years and older adult obesity prevalence of 29.5% (women 35%, men 23% 9) and the number of obese individuals was reached 15,995,392 (25).

According to WHO data in 2016, it was found that obese individuals' number was 16,092,644 in Turkey and 29.5% prevalence of obesity and Turkey is said to be the country with the most prevalent obesity in Europe. Economic Cooperation and Development (OECD) report in the 2017, in 34 countries the 20-79 aged adults in the average obesity and overweight prevalence of respectively 19.4% and 34.5% stated that this rate in Turkey, 22.3% and% 33.1 (26).

TSI, obesity rate of population aged 15 years and older according to data 19.9% in 2014, while in 2016, this ratio was found to be 19.6%. According to the distribution of these rates by gender, in 2016, 15.2% of men were obese and 38.6% were overweight. 23.9% of women were obese and 30.1% were overweight (27).

### **2.3. Etiology of Obesity**

The common feature of all obese individuals is the excessive accumulation of adipose tissue in the body. In general, it is stated that both genetic and environmental factors should

be found together in the formation of obesity and that obesity develops not only as a result of excessive food but as a result of complex interactions (17).

Obesity may be caused by the following factors: central nervous system damage and other neuroendocrine causes, various syndromes due to chromosomal abnormalities and autosomal recessive genetic factors, high calorie diet, inadequate physical activity, medication, smoking and psychosocial. However, a specific cause for obesity is found in very few cases. Recent views suggest that obesity is a multifactorial problem(28, 29).

Obesity, which is caused by getting more energy to the body than necessary, is defined as exogenous type obesity and most of the obese are of this type. In endogenous obesity, obesity is accompanied by many diseases and syndromes (29).

### **2.3.1. Central Nervous System Problems and Other Neuroendocrine Causes**

In the hypothalamus, an important region of the brain, there are centers related to appetite (ventrolateral hypothalamus) and satiety (ventromedial hypothalamus). As a working mechanism, satiety center has an inhibitory effect on the appetite center.

Injury to the inhibitor center, the satiety center, causes the other center to work more and causes hypothalamic obesity with obesity. Damage to these centers as a result of trauma, tumor or infection causes hypothalamic obesity. Obesity has been reported in humans as a result of head trauma, meningitis and brain tumor (30).

The entire endocrine system that starts with hypothalamus and ends with reproductive organs has been examined for the cause of obesity, but it has been reported that endocrine-induced obesity is very rare. Among the hypothalamic syndromes, Fröhlich syndrome and Lorraine-Moon Biedl syndrome cause Sheehan syndrome, pituitary tumors (craniopharyngioma), pituitary operations and irradiation, sarcoidosis, tuberculosis, syphilis, basal meningitis, hypothyroidism, and obesity is seen in endocrine disorders such as hyperinsulinism, pseudohypoparathyroidism type 1, hypogonadism and polycystic ovary syndrome (31)

### 2.3.2. Genetic Factors

In recent years, large epidemiological studies show the relationship between obesity and genetic factors. Obesity has a complex, hereditary feature that is affected by genetic, epigenetic, metagenomics and environmental interactions. Genetic researches have identified a number of genes affecting the phenotype, particularly for early-onset severe obesity (32).

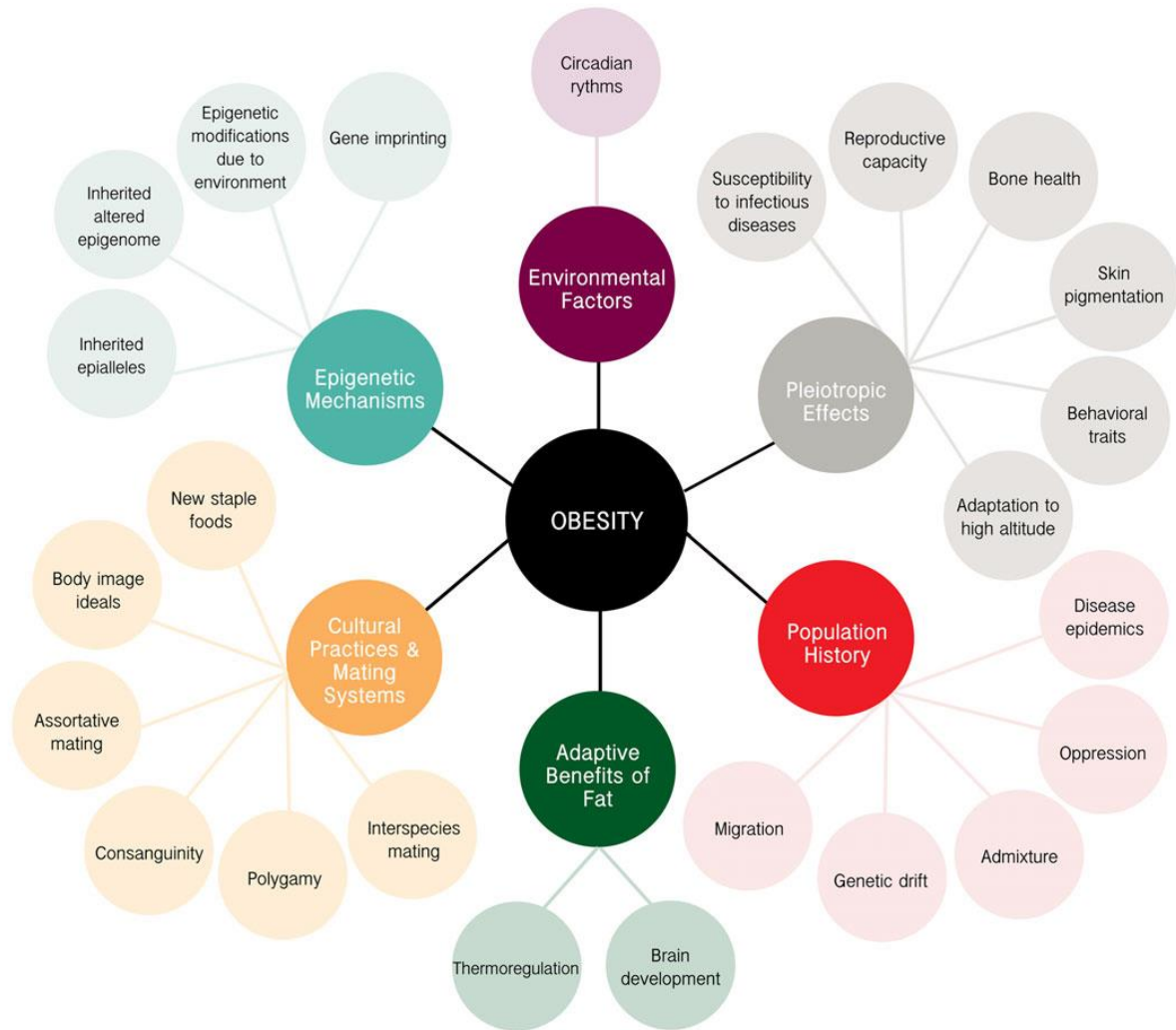
In a study conducted in Denmark, one of the first clinical studies that could prove that genetic factors play a significant role in the etiology of obesity, the researchers studied on maternal and fraternal twins that were reared together or separately. At the end of the study they found that high body weight correlation was to 70% on twins even if they lived separately. Stunkard et al. showed that although adults were raised in an adopted family, the weight of adults was closer to their biological parents (33).

Genetic causes of obesity can be generally classified into:

- **Single gene defect (Monogenic causes):** a single gene mutation cause this, primarily located in the leptin- melanocortin pathway.
- **Syndromic obesity:** severe obesity correlated with other phenotypes such as neurodevelopmental abnormalities, and other organ or system malformations.
- **Polygenic obesity:** caused by cumulative contribution of a large number of genes whose effect is enlarged in a “weight gain supporting” environment.

There is increasing interest in the role of the environment and gene-environment interactions to the role of epigenetics in the development of obesity and obesity-related comorbidities. This relationship provides a logical explanation for the increased prevalence of obesity in the last decade without a drastic change in the genome. The genetic code for the human is homogeneous in the body, but the expression of the code may vary in different cell types. Epigenetics examines changes in genetic expression that occur without a change in the hereditary nucleotide sequence. Epigenetic modifications can be regarded as degrading packages of DNA that allow or silence the expression of certain genes in tissues. Environmental factors and diet or intestinal microbiota may affect epigenetic programming of parental gametes, fetus, and postnatal development, while various stages of life may affect

epigenetic programming (34). Behavioral, environmental, and genetic factors all have a part in causing to be overweight and obese in human populations is shown in Figure 2. 2 (35).



**Figure 2. 2. A plan drawing the biological, environmental and cultural forces that may well explain the current distribution of genetic factors disposing to obesity and leanness in human populations (35).**

### 2.3.3. Environmental Factors and the Relationship between Nutrition and Obesity

One of the most significant factors in the development of obesity is the diet in the first years of life. The prevalence of obesity is less frequent in breast-fed children than in non-breast-fed children. Similarly, the duration of breastfeeding, the time to start supplementary food, and the amount of food taken are also reported to affect the occurrence of obesity (36).



Researchers report that childhood and adolescent obesity is associated with obesity in adulthood and that obesity increases adulthood mortality. Mild obesity is seen as a serious risk for obesity in adulthood. Metabolic rate decreases with age. This is observed as an increase in body weight with age unless the required energy intake to the body is balanced (37).

Causes of obesity may include unbalanced eating habits came from the family, poor nutrition, low energy consumption, hormonal and metabolic disorders, and continuous consumption of fatty and high-energy foods. Previous studies have emphasized that the risk of obesity was 2-3 fold higher in the family with a history of obesity. However, living at an early age apart from the family, disorganized and poor family relations, childhood depression and not receiving health services can cause childhood obesity (38).

Besides unbalanced and poor diet, sedentary lifestyle is another important factor contributing to the risk of obesity. Performing light, moderate or strong physical activities has a significant effect on individuals' daily energy expenditure. Numerous technological advances with industrialization have enabled people to develop from hunter gatherers to highly immobile individuals, which contributes to the development of obesity as a result of restricted daily activities (39).

In addition to technological advances, the still life of the people is supported by technological devices such as mobile phones, televisions and computers (18).

Psychological factors are also among the factors that may cause obesity. Psychological status of people; It has an independent effect on the choice of food, the amount of eating and the frequency of eating. Short-term and long-term changes in eating behaviors are observed by being affected by emotions such as anxiety, sadness, joy and anger. Studies have shown that psychological symptoms such as anxiety and depression are more common in obese individuals than those with normal weight (40). It is known that people increase the amount of eating during boredom, depression, fatigue, and reduce the amount of eating when they feel fear, tension and pain (41). It has been shown that anxiety disorders, depressive disorders, smoking addiction and eating disorders are seen frequently in obese individuals (40). Table 2.2 shows the factors that affect obesity (41).

**Table 2. 2. Etiological factors causing obesity (41)**

<b>Iatrogenic Causes</b>	<b>Social and behavioral</b>
Drugs and hormone treatments Hypothalamus surgery	Socioeconomic factors Ethnicity Level of education
<b>Diet-related obesity</b>	<b>Psychological factors</b>
Eating disorders in infancy Progressive hyperphagic obesity Eating frequently Fatty dishes Eating excessive food	Seasonal emotional disorders Emotional stress Excessive eating due to anxiety Early mother and father loss
<b>Neuroendocrine obesity</b>	<b>Sedentary Life</b>
Hypothalamic syndrome Cushing's syndrome Hypothyroidism Insulinoma Polycystic ovary syndrome I Hypogonadism Growth hormone failure Pseudohypoparathyroidism Night eating syndrome Binge eating (episodes of overeating)	<b>Genetic obesity</b> Autosomal recessive Autosomal dominant transmission X-linked transition and chromosomal abnormalities Alcoholism in the family Age

#### **2.4. Complications of Obesity**

Obesity affects many systems in the body. It is involved in the formation of many pathological conditions that can lead to mortality and morbidity. The most common and affected systems are the endocrine system, musculoskeletal system, cardiovascular system, gastrointestinal system and respiratory system. Apart from these systems, obesity causes both physical and psychological problems; frequency of these complications and early incidence rates increase (42).

Global BMI Mortality Collaboration Since 2016, they have published the results of the largest study investigating the relationship between mortality and BMI. Looking at 239

prospective studies with 10.6 million participants from Europe, Asia and North America, they found that the lowest mortality in all causes of death was between 20-25 BMI. Mortality was significantly increased just below this range and in the overweight / obese range (43).

Obesity is related with a status of chronic low-level inflammation, regulated by metabolic cells in response to excess nutrients. This inflammatory status is present in organs such as the pancreas, liver, brain and adipose tissue and has been involve in immuno-metabolic disease. Immune cells are abundant in adipose tissue and the state of obesity stimulates the activation of inflammatory responses, thereby altering their number and activity. Thus, an inflammation and irregular immune system is seen in the body. These changes may occur as early as childhood. This has been recognized as the central mechanism linking obesity to metabolic and vascular complications. In addition, it was accepted to support the increase in the risk of cancer and infectious diseases (44).

Abdominal obesity is known to cause various lipid disorders. An increase in triglyceride in abdominal obesity, a decrease in HDL-cholesterol level and qualitative changes in LDL-cholesterol are typical features. In addition, abdominal obesity is seen as an important risk factor in the development of type 2 diabetes, metabolic syndrome and cardiovascular diseases characterized by dyslipidemia, hyperglycemia, hypertension (45).

When the effect of obesity on Type 2 Diabetes Mellitus (T2DM) is considered, the majority of patients with T2DM are obese. The rapid increase in T2DM cases over the last two decades largely explains the global outbreak of obesity. The risk of developing T2DM enhances with increasing body weight; In a research of 21,000 adults in the National Health and Nutrition Examination Questionnaire (NHANES), it was presented that this risk could increase to 8% in normal-weight people and up to 43% in individuals with morbid obesity (46).

Cardiovascular disease is one of the major disease groups seen with obesity, and current studies have demonstrate that obesity is an independent risk factor for cardiovascular disease (47). It could cause many cardiovascular complications such as hypertension, dyslipidemia, coronary heart disease, cerebrovascular disease and prothrombotic condition. Increased circulating blood volume, increased vasoconstriction, and increased pulse volume due to obesity play a role in the development of hypertension (48).

The risk of hypertension is less in non-obese children, but about 3 times higher in obese children. In adults, BMI and blood pressure shows a parallel relationship and weight loss is said to be a blood pressure lowering effect in hypertensive patients (49).

Obesity leads to structural changes in the heart and vessels and increases the risk of cardiovascular disease. These types of dyslipidemia are associated with obesity, predisposing to the development of cardiovascular diseases such as hypercholesterolemia, hypertriglyceridemia, high LDL cholesterol and low HDL-cholesterol. Every 10% increase in body weight affects blood cholesterol levels and increases by 10-15 mg / dl (8).

In the Framingham Heart Study, 6000 adult subjects who without any history of heart failure were followed for 14 years, and the risk of heart failure doubled with obesity and increased risk of stroke. After adjustments to existing risk factors, it was said that the risk of heart failure increased by 5% in men and 7% in women for every 1 kg / m<sup>2</sup> change in BMI (48).

When the relationship between cancer and obesity is examined; obesity is estimated to account for 20% of all cancer cases. In particular, a large-scale study conducted by the International Cancer Research Agency concluded that obesity was caused 30 percent of cancers of the esophagus, colon, breast, endometrium, and kidney. It also increases the risk of gallbladder, pancreatic and gastric cancer as well as leukemia (50).

In addition, the prognosis is worse in obese individuals who have developed some types of cancer. There is a strong relationship between breast cancer and obesity, especially in menopausal women. One study reported that obesity or overweight may increase the risk of breast cancer in pre-menopausal women between 50% and 70%. Again, it was found that obese women with breast cancer had a 46% chance of developing metastasis and a 38% greater risk of death than their weaker counterparts (51). According to the Nurses Health Study, there is a strong relationship between cancers not only the BMI but also the waist / hip ratio. Some cancer risks have been shown to decrease with weight loss; it has been shown to reduce the risk of breast cancer, especially among postmenopausal women (52).

Obesity can cause many physical illnesses and cause problems in the psychosocial field. Obese individuals are often subject to public disapproval and stigma because of their

weight, and women are exposed to more discrimination. This occurs in employment, health, education and other fields (53). Depression is more common in obesity, especially in women and adolescents, whereas weight loss is associated with improved mood. Adolescents who are obese or overweight or perceive themselves in this way are more likely to perform more risky behaviors than those of normal weight. Use of this substance may include risky sexual behavior or violence (54).

## **2.5. Relationship between Obesity and Body Perception**

Body perception is defined as the evaluation of the positive and negative emotions of the person against the parts of their body and their functions. Body perception is affected by gender, age, body structure and weight status, self-esteem, sensitivity to the body and the meaning given, media pressure and the value that society attaches to body appearance. If there is a difference between the person's own body and the body shape that they want to be, body dissatisfaction emerges (55).

Body perception varies according to the age and society. Many factors influence the formation of body perception. In ancient times, goddesses and women were overweight and appreciated for these situations, but today women are encouraged to a thin and delicate body structure. The individual enters the process of body perception by being influenced by models with criteria accepted as ideal body in the culture to which they belong. Thus, the ideal body criteria are determined by friends, family and social environment (56). According to psychoanalyst Jacques Lacan's mirror theory, the child compares himself and the people around him when they reach about 18 months. When children reached the age of five, it was seen that they evaluated other children according to their weight and appearance (57).

With the 20th century, the definition of beauty is considered equivalent to being thin and weak all over the world. It is thought that individuals who care about their bodies and not to gain weight love their bodies and themselves and therefore have high self-esteem (58). Positive body perception is seen as having a slim body for girls and muscular, sporting body for boys. Among patients who are overweight or obese, those who are said to be overweight by the doctor appear to have a much closer to reality perception in their patient reports regarding their own weight, desire to lose weight, and recent weight loss efforts (59).

It is envisaged that people with negative body perception may resort to actions such as starvation, fasting, diarrhea, smoking, unhealthy diets, or doing extreme sports to control their weight. It is also said that weight-related concerns may be associated with eating disorders, low self-esteem, depressive mood, and suicidal ideation. Women perceive themselves as overweight more often than men who are actually overweight. Theories of body perception in psychology suggest that men and women perceive their own bodies differently (60).

The consumption culture that is formed today encourages the individual to be happier, enjoyable and social by imitating the lifestyle, activities and even experiences of the upper socio-economic classes. It is recommended that the individual reach the highest level of health through celebrities and media. These incentives require the body to be reshaped, to be in the currently accepted form and to be energetic. The celebrities of the entertainment, health and sports culture industries in the media design their own body image on behalf of individuals with their own experiences (61).

Media information and pressure on diet types, dietary products, mechanical bodybuilding tools, weakness, or body shape correction-protection are mostly aimed at women. The repetition of the weakness led to its idealization. The distance to the ideal body leads to disturbances in the body image (62).

It is seen that being thin in the media is evaluated in the same way as beauty. At the same time, flawless bodies and faces are constantly shown on the media through television, magazines and social media. Thus, in the minds of people from an early age, the images of men and women are formed with the idea of perfection. For these reasons, a distorted body image of individuals aiming for perfection occurs themselves (63).

In a study conducted with 131 female students, the body image of media images and the ideal adoption of thinness were studied. As a result of the study, it was found that media images were seen as real ideal and comparing their own or friends' bodies with media images was associated with the ideal adoption of thinness. In addition, some disorders related to eating attitudes and behaviors such as dieting, overeating, guilt before and after eating were also found to be related to the real ideal of media images and to compare these images with their own or friends' bodies (62).

## 2.6. Social Media

Social media is the fastest developing technology in the context of Internet and communication technologies. Social media refers to the way users with similar ideas and ideas communicate with each other using web services (64).

Sociality can be expressed as the desire of the individual to be a member of the society and the need to communicate with other people. This need has been experienced in a different dimension and in different channels with social media in recent years. Vural and Bat defined social media as a way of communication based on sharing and discussion that eliminates time and space limitations (5).

According to Toprak et al. , the personal profile of the individual in social networks is a means of increasing his / her reputation and status. Social media, which is the sum of these networks, is a web-based tool that supports the interaction between people with the ability to see the connections of other individuals and leave messages to each other, increases the sharing of individuals with common interests, and gives everyone the chance to create their own personal profiles and friends list they want to communicate (65).

In today's sense, social media has escaped from the unidirectional and limited information structure of the Internet and entered into our lives with the new system that Tim O'Reilly called "web 2.0 in 2004. Prior to this, only the content presented to the readers by the publishers was being followed, as if reading a newspaper could not be interfered with. With this new technology, internet users can access information quickly and indefinitely. More importantly, users who created their own content had the opportunity to publish their content and had the opportunity to allow their content to be interpreted and updated by others (66).

Social media provides its users with an independent interaction environment free from the constraints they can discuss. It provides establishing a social network environment, introducing themselves in social environment, interacting with other users, communicating and maintaining, sharing the content they have created, including personal information, thoughts, photos, videos, music and so on. Social media are online platforms where users can be consumers as well as producers, providing opportunities such as creating profile pages

and interacting with people, discovering new friendships, being in new social formations (67).

Today, with the differentiation of the means of communication, it has increased the interest in information technologies and the Internet, and in such an environment it has become inevitable that social media will find an important place for itself. The use of social media has become an indispensable habit among the people who frequently use the Internet in their daily lives, while meeting the social demands of many people to a significant extent, but it has been the focus of negative criticisms of those who find this situation negative (68).

According to 2019 data from an international statistics company (Wearesocial), more than half of the world uses smartphones and has 3.48 billion active social media users. Also in this study, 72% of the population in Turkey is connected to the Internet and is reported to have 64 million users of social media (69). We Are Social in 2019 according to the Internet and social media usage statistics individuals in Turkey 7 hours 15 minutes per day on the Internet, it is to spend the 2 hours 46 minutes on social media. Time spent on the Internet in 2016 is reported to be 4 hours and 14 minutes. The most commonly used social networks are Facebook, Youtube, Whatsapp, Facebook Messenger, Wechat, Instagram, Twitter, Google+, Skype, Linkedin (69). Turkey Statistical Institute, Household Survey on Information Technology Usage by 88.3% Internet access from home while species found that 75.3% of the total Internet usage in Turkey (70). The research found purpose of the Internet usage are online messaging (93.9%), social media to create a profile, send a message, send photos, content, etc. (81.4%), making phone calls / video calls over the Internet (via webcam) (83.7%), searching for health information (injury, illness, nutrition, etc.) (69.3%) (71).

### **2.6.1. Characteristics of Social Media**

The reason of the increasing popularity of social media applications is that according to Hazar, the most important and distinctive feature is that individuals can express themselves clearly to all social media users through Internet and make their own information and ideas accessible worldwide (72).



When the literature is examined, it is seen that the characteristics of social media are classified under five main headings. These are participation, openness, conversation, community and connectivity (73).

**Participation:** It makes it easier for social media users to cross the walls of communication. It provides the opportunity for the people who are contacted to give feedback and show the necessary contributions. An example of this is that celebrities or bureaucrats respond to individuals who want to communicate with them through social media or write comments.

**Clarity:** Social media often eliminates as many barriers as possible for its users and aims at accessing content and accessibility as much as possible. It is very clear and easy to use.

**Conversation:** Traditional media involves mostly one-way communication. In classical mass media, feedback is difficult and time consuming. On the other hand, social media provides individuals with a two-way communication, comfort and timely feedback that makes a difference. Thus, content owners, such as readers, listeners or spectators, are also involved in this interaction.

**Community:** Social media allows communities to be formed rapidly and effectively communicate on the topic or people concerned. Users in these communities; they can communicate quickly and easily on common subjects, people, photographs, music, political thought or TV shows that interest them.

**Connectivity:** Many social media platforms are interconnected. The advertisement has the ability to link to other resources, sites and people for user convenience or other reasons. The features mentioned can be discussed for each social media platform. The most frequently used ones for this study are discussed.

### **2.6.2. Social Media Applications**

Classmates.com (1995) and SixDegrees.com (1997) are examples of the first sites of the twenty-first century, in line with the modern definition of social networking. Classmates.com provides users with a theme to find past classmates, while SixDegrees.com allows users to create their own profile and friend list (72). The Six Degrees social media application, which succeeded in reaching millions of users, was closed in 2001 with the increasing popularity of such sites. When the reasons for failure are considered, it is stated

that there are no alternative applications and insufficiencies other than communication with the users. From this point of view, it is seen that the social media network should not only communicate but also create content and publish, establish dialogue and contribute to the development of new relations (74).

In 2002, Friendster, the first example of today's social media, was founded. This site is still actively used. It encourages users to follow their profile updates and encourage their friends to join the platform.

It is seen that social media applications such as Facebook, Myspace, Friendster, Hi-5, Twitter and Netlog, whose interfaces have been further developed, have become very popular in the 2000s. The most well-known social media applications created after 2003 were Facebook and Myspace. With the addition of experiences from the past, new social media sites started to be formed in 2003 and many similar social media sites were established due to the increasing interest of users. To give an example of this social media, the following can be shown. Mychurch, Twitter, Stylehive, Fabulously40, Dogster, Couchsurfing, Myspace, LastFm, DeLicio.us, Tribe.net, Plaxo, LinkedIn, Flickr, Orkut, Photobucket, Second Life, Care2, Ning, Catster, Digg, BiggerPockets, Hyves, ASmallWorld , Bebo, Reddit, Yahoo! 360, Youtube, Multiply, Mixi, Dodgeball, Piczo, HI5, Cyworld, Xang (72).

Information about some of the most commonly used applications examined in this study is given below.

*Facebook* is the most widely used social media application of our time and was founded by Mark Zuckerberg in 2004 for the communication of Harvard University students under the name Thefacebook. The application was made accessible to other universities in the state of Boston and then to the universities of the United States. In 2006, it has become an application that can be registered by e-mail address of everyone who has achieved the current qualifications. Facebook gives users the ability to share personal data, photos and videos, make friends, find old friends, comment on each other, form groups, use for political, make trade, organize and join groups and play online games (75).

*Twitter* is a social networking website developed by Jock Dorsey in 2006 to communicate with Tweets created by creating shorter sentences (76). Users connect to each other through

follow-up, not by adding as friends. Twitter is an application that allows users to share instant thoughts with followers with up to 280 characters. Twitter has become one of the most effective and popular social media tools, increasing accessibility and speed through instant messaging (77).

*Instagram* was founded in 2010 by Kevin Systrom and Mia Krieger as a photo sharing application. Instagram users can edit and filter their photos to get an ideal image, then share it with friends and other users (78). The application is reported to be very popular and was purchased by Facebook in 2012 (77). While Instagram first emerged, the focus was on photo sharing, and its use expanded over time. Especially users who want to promote products use visual and short messages to reach new audiences. With shared pictures, awareness can be created for the products and ,Instagram allows its users can make trade (79).

*YouTube*, founded in 2005, is a site launched under the slogan of ‘Broadcast Yourself’ the United States. It was acquired by Google in November 2006 and is currently one of Google's subsidiaries. An application that allows users to upload, share and watch videos. YouTube includes video clips, music videos, short original videos, educational videos, and so on. content is published (80). YouTube offering the opportunity to disseminate content to a very broad audience of site visitors and content is diverse and global. The site thus serves as an attractive platform for both amateur content creators, media companies alike politicians, businesses, news organizations, education institutes, music and film artists, and people from all walks of life use YouTube (81).

*Tumblr* is a microblogging and social networking site founded in 2007 by David Karp, whose name comes from the term ‘tumblelog’, which originates from blog posts. Tumblr, which allows users to have both social networking and own blogs, increases its popularity by not having any rules on the form and type of shared content. Users can share content such as visual, audio, text and video according to their interests (82).

### **2.6.3. Social Media Addiction**

Social media addiction takes its place as a psychological problem like other addiction types in the literature (game addiction, shopping addiction, alcohol addiction, substance addiction, Internet addiction). Considering that social media is an Internet application that

can be accessed over the Internet, it is clear that it is not considered separately with Internet addiction. Before examining social media addiction, the concept of addiction will be explained.

The concept of addiction is often used to describe the dependence on a substance physically (83). According to D÷venci, addiction is an attitude related to the use of a tool that is dependent on a person to provide basic needs of the person in his / her daily routine and to have cognitive and affective disruptions (84). The user in this attitude may be mistaken in observing his own situation. For this reason, it is absolutely necessary to observe the patient's immediate environment and undergo medical treatment (84). Behavioral addictions show the symptoms of physical and psychological dependence (mental occupation, mood variability, tolerance, deprivation, interpersonal conflict, and repetition), which are the main components of addiction, just like alcohol-substance addictions (85). On the other hand, although the term addiction is not included in many new versions of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1995), diagnoses related to substance addiction are found, and in many studies adaptation of substance addiction criteria and other types of addiction are revealed. Addiction types such as pathological gambling, food disease, sexual addiction, general technology addiction, video game addiction are accepted by adapting to substance addiction criteria (86).

The concept of Internet addiction was first advertised by Goldberg in 1996. Goldberg defined Internet addiction as inappropriate use of the Internet, presenting with three or more symptoms at any time during a twelve-month period, leading to clinically significant deterioration or distress, based on the criteria of substance addiction in DSM-IV (87). In the same years, Young tried to define Internet addiction based on DSM-IV's diagnostic criteria for pathological gambling. If 5 of the 8 criteria defined by Young are met, one can be diagnosed as "Internet addict" (88). These criteria are shown in Table 2.3. With the latest amendment, the concept of Substance Abuse and Addiction previously adopted in DSM-V was expanded and changed to Substance Use and Addiction Disorders. Through this change, for the first time in DSM, the approach that substance addiction syndromes are only non-substance "behavior" syndromes has been formally adopted. In this way, not only drug addictions but also compulsive behaviors with substance abuse, compulsive behaviors that

do not follow substance abuse (pathological gambling habit, sex addiction, Internet addiction, etc.) have entered into the same categorical classification (89). "Internet gaming" is a definition that excludes normal Internet use, gambling and social media use and is added to the third section in DSM-V under substance-related and addictive disorders. Further studies are needed to be accepted as a formal disorder and to be classified as addiction in the future (90, 91).

**Table 2. 3. Young's Recommended Diagnostic Criteria for Internet Addiction (91)**

1. Excessive mental engagement with the Internet (continuous thinking of the Internet, dreaming of activities on the Internet, thinking of the next activity planned on the Internet, etc.)
2. The need to use more and more Internet to get the desired enjoyment
3. Failed attempts to control, reduce or abandon the use of the Internet completely
4. Feel unrest, depression or anger if the use of the Internet is reduced or discontinued completely
5. Stay on the Internet longer than originally planned
6. Endanger or lose an opportunity for education, career or problems with family, school, work and friends due to excessive Internet use
7. Lying to others (family, friends, therapist, etc.) about their stay on the Internet
8. Use the Internet to avoid problems or to avoid negative emotions (eg. helplessness, guilt, depression, anxiety)

Nowadays, researchers report that the symptoms seen in Internet addiction are seen in social media platforms (92). In a study conducted at the Chicago Booth School of Business University, it was determined that the social network addiction of Facebook and Twitter members between the ages of 18-35 was higher than smoking and alcohol addiction levels. Therefore, it was emphasized that social media addiction can be more harmful than cigarette and alcohol addiction. Researchers point out that the desire to be online on social networks

is higher than the desire to go to sleep and rest, and that this could be a social disaster. While it is possible to stay away from addictive substance in cigarette and alcohol addiction during the treatment process, it is not possible to remove the Internet that includes social media applications used in many jobs in our daily lives. It is said that getting rid of an Internet addiction is a more difficult process because it is intertwined with our lives (93).

In the study conducted to measure Internet addiction by 178 students who continue their education in various universities in 2014, it is reported that the average level of Internet addiction of the participants is 52.39 and 52.8% of the students who are not Internet addicts are likely dependent. As a result of the study, it was found that there was a moderate positive relationship between social network use goals and Internet addiction (94).

Some studies emphasize that social media use negatively affects life, while low and poor quality sleep periods, disruption of daily work, decrease in academic performance, problems between married couples, decrease in real life social relations or asociality are reported (95). In Korea a study conduct to examine the fatigue and pain related to Internet usage among university students was indicated that university students who use the Internet experience the most fatigue and pain in the eyes, neck, and shoulders (96). Studies said that the people who addict the internet or smartphone not do much physical activities, they mostly neglect their health, and also negative physical marks like headaches, poor posture, backaches, carpal tunnel syndrome, poor personal hygiene, irregular eating, dry eyes, sleep deprivation, lack of sleep which can affect immune functioning and hormone secretion forms, cardiovascular and digestive pattern (97). Today, it can be said that the use of social media as a leisure activity is increasing (98). Sedentary behaviours, such as sitting, growths the risk of type 2 diabetes, cardiovascular disease, obesity and worse mental health status (99). Despite the fact that no studies have inspected social media use and its impact on sitting time and BMI, some studies have confirmed negative health effects of other screen-based behaviours together with the inclusion of television watching, computer and Internet use (100). Continued use of social media, which increases the length of time to stay awake by shortening sleep times, can lead to insomnia. However, it is clear that the use of uncontrolled social media may adversely affect life as inadequate sleep will reduce daily living activities (101).

In addition, in the study conducted by Çam and İşbulan with future teachers, Facebook addiction was discussed and the findings revealed the characteristics of Facebook addicts (92). In the study, it was observed that males had higher addiction than females in terms of gender and characteristics of addicts were similarly indicated. When someone disturbs them while using Facebook, they shout, break or act angry. They try to limit the amount of time they spend on Facebook, they fail, they hide how long they stay on Facebook, they choose to spend time on Facebook instead of going out with friends, they feel depressed, pessimistic or frustrated while offline, even if they go away they return to Facebook immediately (92). According to Hazar, one of the important concepts in addiction is that the individual tends to avoid unrest (72). The addictive factor is more widely accepted if it allows individuals to avoid unrest (72).

Another research considering Facebook's addiction to the Happy Farm game application was conducted by researcher Wu, who claimed that this game was popular in Taiwan, with 197 college students in Taiwan (102). As a result of the research, it was found that there was a positive relationship between Internet addiction and those who played the game for 6 months. Although the researcher draws attention to game addiction, it should also be taken into consideration that playing the game on Facebook may lead to a potential social media addiction or a possible social addiction lead to a potential game addiction (102).

To summarize, according to Tutgun Ünal's definition, Social media addiction is a psychological problem that develops through cognitive, affective and behavioral processes and causes problems such as occupation, mood modification, relapse and conflict in many areas of daily life such as private, work / academic and social fields (103).

### **3. MATERIALS AND METHODS**

#### **3.1. Research Model**

This research is descriptive type with analytical components. In this research, the relationship between obesity status and social media addiction and body perception status of young people between the ages of 18-27 were investigated.

#### **3.2. Universe and Sample**

We have tried to reach every student therefore our model was non probability- convenience sampling method.

Before starting the study, approval was obtained from Yeditepe University Hospital Clinical Research Ethics Committee. Approval form is given in the appendix 1.

The population of the study consisted of Yeditepe University students aged 18-27 in Istanbul. The research was carried out in Yeditepe University in the Spring term of 2018-2019 academic year with the 1st, 2nd, 3rd, 4th grade students.

The research model is descriptive type with analytical components. When the prevalence of obesity in the selected age group was determined as 10% (with the data in the literature), the sample size was calculated as 138 with 95% confidence interval and 5% error margin.

The aim of the study was to reach 150 people with the rate of wastage, and the research was completed with 248 students who did not meet the exclusion requirements in the selected faculties and between the specified dates.

Below are the inclusion criteria.

Inclusion criteria:

- Being a student of Yeditepe University, Faculty of Health Science
- Volunteer to participate in the research
- No communication problems
- Using social media



All data were analyzed with SPSS statistical program. In the case of normal distribution, t-test was used for the measurement values, and Mann-Whitney U test was used in cases where normal distribution was not observed. Chi-square and Fisher's exact tests were used to compare the values indicated by the census.

### **3.3. Data Collection Tools**

In this research, "Social Media Addiction Scale" to determine the social media addiction level of the participants 'Body Image Scale' to measure body perception, "Personal Information Form" along with demographic data is used to determine variables that cause obesity. The questionnaires were applied in classrooms during the lessons.

#### **3.3.1. Personal Information Form**

This form, which is applied to the sample group, includes questions that determine the demographic characteristics and other factors that affect obesity formation (gender, age, type of school, class, Internet use purposes, presence of a computer at home, income and education levels of their families, etc.). The questions were prepared by the researcher. Personal information form is given in the appendix 2.

#### **3.3.2. Social Media Addiction Scale**

Social Media Addiction Scale (SMAS) is a measurement tool developed by Ünal (2015) to measure the social media addiction of university students (103). After all validity and reliability studies, it is a 5-point Likert-type scale consisting of 41 items and graded with frequency expressions in the range of "Always", "Often", "Sometimes", "Rarely" and "Never". The internal consistency coefficient of the scale Cronbach alpha values is 0.967. The lowest score that the participants can get from SMAS is 41 and the highest score is 205. SMAS is given in the appendix 3.

##### **3.3.2.1. Sub-dimensions of Social Media Addiction Scale**

In factor analysis of the scale developed by Tutgun-Ünal, it was determined that SMAS consisted of four dimensions.

Accordingly, items 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> in the measuring tool constitute the first dimension, all of the items are related to "*occupation*".

The occupation constituting this subscale means that the person has to think intensively about the social media activities or activities and engage in these activities.

The 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> items in the measurement tool constitute the second dimension and all seem to be related to "*mood modification*". In this subscale, mood modification means the change in the mood of the social media activities and changes in the mood of the person during these activities.

The 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup> and 22<sup>nd</sup> items in the measuring tool are the third dimension and are related to "*relapse*". It measures the inability to control the use of social media and the repetition of the usage of same dose after a break.

The 23<sup>th</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup>, 27<sup>th</sup>, 28<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup>, 31<sup>th</sup>, 32<sup>th</sup>, 33<sup>th</sup>, 34<sup>th</sup>, 35<sup>th</sup>, 36<sup>th</sup>, 37<sup>th</sup>, 38<sup>th</sup>, 39<sup>th</sup>, 40<sup>th</sup>, 41<sup>th</sup> items in the measuring tool are the fourth dimension and related to the "*conflict*". It measures the effect of social media on the contradictions and negative results of the person's relations, work / education and other activities.

The scores obtained from the whole SMAS and sub-scales indicate the level of addiction in appendix 4.

### **3.3.3. Body Perception Scale**

The Body Perception Scale (BPS) was developed in 1953 by Secard and Jurard (104). It is a scale that determines one's satisfaction with body parts or body function. It is a five-point Likert type measuring instrument consisting of 40 items. (5 = I like it quite, 4 = I like it quite, 3 = I'm undecided, 2 = I don't like it much, 1 = I don't like it at all). The most positive expression gets 5 points and the most negative expression gets 1 point. Accordingly, the lowest total score is 40 and the highest total score is 200. The increase in the total score obtained from the scale indicates an increase in the satisfaction of the person from body parts or function, and the decrease in the score indicates a decrease in satisfaction. The validity and reliability of the Turkish version was Hovardaoglu (1993) and the Cronbach's alpha coefficient was 0.91 (105). BPS is given in the appendix 5.

## **Statistical Analysis**

Number Cruncher Statistical System 2007 (Kaysville, Utah, USA) was used for statistical analysis. While evaluating the study data, descriptive statistical methods (Mean, Standard Deviation, Median, Frequency, Ratio, Minimum, Maximum) as well as distribution of the data were evaluated by Shapiro-Wilk Test. Kruskal-Wallis Test was used for comparison of the three and above groups with normal distribution of the quantitative data, ANOVA Test was used for comparison of three groups with normal distribution, Mann-Whitney U Test was used for comparison of two groups with normal distribution, and Student T Test was used for comparison of two groups with normal distribution. Spearman's correlation was used to show the relationship between quantitative data. Spearman Correlation was used to determine the relationship between non-normally distributed variables. Significance was evaluated at  $p < 0.01$  and  $p < 0.05$ .

In the study, the personal information form (Appendix-2) created by the researcher was used as a data collection tool and the SMAS (Appendix-3) was used to measure social media addiction, and body perception scale (Appendix-5) was used to measure body perception. Number Cruncher Statistical System (2007) statistical program was used for data analysis. Data analysis was conducted for research purposes.

## 4. RESULTS

### 4.1. Statistical Findings of the Research

#### 4.1.1. Demographic Data and Findings of Survey Questions

In the study, the personal information form (Appendix-2) created by the researcher was used as a data collection tool. 248 university students with an average age of 21 years participated in this study. Participants are students of the Faculty of Health Sciences of a Yeditepe University in Istanbul. In this study 91.2% (n=227) of the participants was female and 8.8% (n=22) was male. The mean age was  $21.42 \pm 1.51$ . The mean of the measurements are shown in Table 4.1.

**Table 4. 1. The mean values of the measurements**

	<i>Mean <math>\pm</math> Sd</i>	<i>Min-Max (Median)</i>
<i>Age</i>	$21.42 \pm 1.51$	18-26 (21)
<i>BMI</i>	$21.66 \pm 3.17$	16.4-36.2 (21.1)
<i>Number of Cigarettes per Day</i>	$12.14 \pm 5.68$	3-25 (10)
<i>Total years of Smoking</i>	$3.99 \pm 2.23$	1-10 (4)
<i>Number of Drinks per Week (Glass)</i>	$2.51 \pm 3.4$	0-25 (2)
<i>Number of Days Exercised per Week</i>	$3.76 \pm 1.68$	1-7 (3)
<i>Minutes of Exercise per Day</i>	$54.49 \pm 28.11$	6-130 (60)
<i>Number of Meals per Day</i>	$3.22 \pm 0.87$	1-7 (3)
<i>Leisure Time in Day</i>	$3.61 \pm 1.65$	0-10 (3)

While 43.8% (n = 109) of the participants were studying in the nutrition and dietetics department, 16.8% (n = 42) were in physiotherapy and 39.4% (n = 98) were in the nursing department.

Of the participants 29.7% (n = 74) were 1st grade, 18.9% (n = 47) were 2nd grade, 32.5% (n = 81) were 3rd grade and 18%, 9 (n = 47) are in 4th grade.

BMI values ranged between 16.4 and 36.20 and the mean was found to be  $21.66 \pm 3.17$ . The average number of days of exercise per week was  $3.76 \pm 1.68$ . The number of

minutes exercised per day was  $54.49 \pm 28.11$ . The number of meals per day was  $3.22 \pm 0.87$ . As the reason for the average number of meals being three, it may be considered that there are nutrition and dietetics students among the participants and that students studying in health related departments are conscious about this subject. The leisure time during the day was  $3.61 \pm 1.65$ .

100% (n = 249) of the participants were single.

**Table 4. 2. Distribution of Participants' places of living**

		<b>n</b>	<b>%</b>
<b>Places of living</b>	<b>With Family</b>	128	51.4
	<b>In The Dormitory</b>	36	14.5
	<b>With Friends</b>	32	12.8
	<b>Alone</b>	48	19.3
	<b>Other</b>	5	2.0

Table 4.2 shows the places where the participants lived. While 51.4% (n = 128) of the participants live with their families, 14.5% (n = 36) in the dormitory, 12.8% (n = 32) in the home with their friends, 19.3% (n = 48) live alone and 2% (n = 5) live elsewhere.

Of the participants 9.7% (n = 24) had a very good economic status, 46% (n = 114) were good, 42.3% (n = 105) were moderate and 1.2% (n = 3) bad and 0.8% (n = 2) very bad.

While 35.5% (n = 88) of the participants were not skipping meals, 64.5% (n = 160) were skipping meals.

**Table 4. 3. Meal Skipping Status of Participants**

		<b>N</b>	<b>%</b>
<b>Which meal do you skip?</b>	<b>Breakfast</b>	93	58.9
	<b>Lunch</b>	58	36.7
	<b>Dinner</b>	7	4.4

Table 4.3 shows the skipping status of the participants. While 58.9% (n = 93) of the participants skipped breakfast, 36.7% (n = 58) skipped lunch and 4.4% (n = 7) skipped dinner.

**Table 4. 4. Range of Snack Foods in Snacks**

	N	%
<b>I Don't Have A Snack</b>	33	5,5
<b>Biscuit, Chocolate, Candy</b>	137	22,9
<b>Fried potatoes</b>	20	3,4
<b>What do you eat in snacks?</b> <b>Nuts</b>	110	18,4
<b>Hamburger, Hot Dog, Sandwich etc.</b>	37	6,2
<b>Fruit</b>	118	19,8
<b>Cucumber, Carrot, Vegetable etc.</b>	56	9,4
<b>Yogurt, Milk, Kefir</b>	81	13,6
<b>Other</b>	5	0,8

Table 4.4 shows snacks. Of the participants 5.5% (n = 33) had no snacking habits, 22.9% (n = 137) of biscuit-chocolate-sugar, 3.4% (n = 20) of french fries, % 18.4 (n = 110) were nuts, 6.2% (n = 37) hamburger-hot dog-sandwich, etc., 19.8% (n = 118) fruit, 9.4% (n = 56) cucumber-carrot-vegetable etc., 13.6% (n = 81) yogurt-milk-kefir and 0.8% (n = 5) consumes other snacks.

While 28.9% (n = 100) of the participants were mainly fed by vegetables and fruits, 28.9% (n = 100) were meat-weighted, 8.4% (n = 29) were fast food, 11% 6 (n = 40) milk products, 19.9% (n = 69) cereal weight and 2.3% (n = 8) are fed with other groups.

**Table 4. 5. Distribution of Social Media Applications**

<b>Applications of Social Media</b>	<b>N</b>	<b>Percent</b>	<b>Percent of Cases</b>
<b>Facebook</b>	110	10.7%	44.4%
<b>Twitter</b>	129	12.6%	52.0%
<b>Instagram</b>	236	23.0%	95.2%
<b>Foursquare</b>	12	1.2%	4.8%
<b>Pinterest</b>	68	6.6%	27.4%

<b>Applications of Social Media</b>	<b>N</b>	<b>Percent</b>	<b>Percent of Cases</b>
<b>Google+</b>	114	11.1%	46.0%
<b>LinkedIn</b>	30	2.9%	12.1%
<b>Tumblr</b>	10	1.0%	4.0%
<b>Youtube</b>	219	21.3%	88.3%
<b>Snapchat</b>	98	9.6%	39.5%
<b>Total</b>	1026	100.0%	413.7%

Table 4.5. shows the distribution of usage of social media applications. The most common application among the participants was Instagram with 95.2% (n = 236). The second most preferred application was Youtube with 88.3% (n = 219), followed by Google+ with 46.0% (n = 114) and Facebook with 44.4% (n = 110).

**Table 4. 6. Range of Social Media Usage Time**

	<b>n</b>	<b>%</b>
<b>Social Media Usage Time</b>		
<b>Between 1-3 Years</b>	26	10.5
<b>Between 4-6 Years</b>	86	34.7
<b>7 Years and Above</b>	136	54.8

While 0.4% (n = 1) did not use social media, 99.6% (n = 248) did. Table 4.6 shows the distribution of participants by Social Media Usage Time. While 10.5% (n = 26) of the participants were using social media for 1-3 years, 34.7% (n = 86) were between 4-6 years and 54.8% (n = 136) for more than 7 years.

In the study, the personal information form (Appendix-2) created by the researcher was used as a data collection tool and the SMAS (Appendix-3) was used to measure social media addiction, and body perception scale (Appendix-5) was used to measure body perception Number Cruncher Statistical System (2007) statistical program was used for data analysis. Data analysis was conducted for research purposes.

In this section, the scores obtained from the subscales of occupation, mood modification, relapse and conflict, (spend more time than planned in applications, long-term use, excessive occupation with the idea of entering social media, wondering what's going on in social media, constant desire and wasted efforts to reduce use, use it to get rid of negative thoughts, use it to feel alone and forget problems, reducing significant social, work and interpersonal activities, maintaining use despite known negative consequences, withdrawal symptoms, physical problems (back, head, eye aches), affecting sleep and eating patterns) and the total of the scale, which constitute the SMAS regarding the level of social media dependence of university students, the scores obtained from the BPS and BMI values were examined in order to determine whether there was a statistically significant and the following results were found.

**Table 4. 7. Comparison of Scales by Department**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>Body Perception Scale</b>	<b><i>Nutrition and Dietetics</i></b>	109	147.12±22.61	84-200 (146.5)	
	<b><i>Physical therapy and rehabilitation</i></b>	42	142.76±28.14	40-189 (146.5)	<sup>b</sup> 0.282
	<b><i>Nursing</i></b>	98	151.24±25.87	80-198 (151.5)	
<b>SMAS Occupation</b>	<b><i>Nutrition and Dietetics</i></b>	109	34.47±9.1	14-52 (36)	
	<b><i>Physical therapy and rehabilitation</i></b>	42	35.74±9.2	17-54 (35)	<sup>a</sup> <b>0.013*</b>
	<b><i>Nursing</i></b>	98	31.35±9.6	12-58 (31)	
<b>SMAS Mood Modification</b>	<b><i>Nutrition and Dietetics</i></b>	109	12.46±4.5	5-25 (13)	
	<b><i>Physical therapy and rehabilitation</i></b>	42	12.52±4.61	5-22 (13)	<sup>b</sup> 0.924
	<b><i>Nursing</i></b>	98	12.23±4.62	5-21 (12)	
<b>SMAS Relapse</b>	<b><i>Nutrition and Dietetics</i></b>	109	9.82±4.61	5-25 (8)	
	<b><i>Physical therapy and rehabilitation</i></b>	42	10.14±4.14	5-20 (10)	<sup>b</sup> 0.832
	<b><i>Nursing</i></b>	98	9.95±4.4	5-22 (9.5)	



<b>SMAS Conflict</b>	<b>Nutrition and Dietetics</b>	109	33.04±12.12	19-74 (31)	
	<b>Physical therapy and rehabilitation</b>	42	34.07±13.46	19-71 (32.5)	<sup>b</sup> 0.360
	<b>Nursing</b>	98	31.68±12.86	19-73 (27)	
<b>SMAS</b>	<b>Nutrition and Dietetics</b>	109	89.8±25.28	45-154 (89)	
	<b>Physical therapy and rehabilitation</b>	42	92.48±25.47	49-151 (90.5)	<sup>b</sup> 0.158
	<b>Nursing</b>	98	85.21±26.74	41-155 (79)	
<b>BMI</b>	<b>Nutrition and Dietetics</b>	109	21.16±3.11	16.4-36.2 (20.5)	
	<b>Physical therapy and rehabilitation</b>	42	23.16±3.09	16.8-32.5 (23.05)	<sup>b</sup> 0.001**
	<b>Nursing</b>	98	21.56±3.09	16.8-33.5 (20.9)	

<sup>a</sup>ANOVA Test. <sup>b</sup>Kruskall Wallis Test. \* $p < 0.05$  \*\* $p < 0.01$

Table 4.7 shows comparison of scales by department. While the mean score of the Nutrition and Dietetics Department students from the BPS was 146.38 the mean score of the Physiotherapy and Rehabilitation Department students was 142.76 and the nursing department students were 151.24. The increase in the total score obtained from the scale indicates an increase in the satisfaction of the person from body parts or function, and the decrease in the score indicates a decrease in satisfaction. BPS did not show statistically significant difference according to the department ( $p > 0.05$ ).

When the average SMAS scores in Table 4.7 are examined, it is seen that Nutrition and Dietetics students get 89.8 points, Physical therapy and rehabilitation 92.48, Nursing 85.21 points. The minimum score of the scale is 41 and the maximum score is 205 and the increase in the total score obtained from the scale means that social media addiction also increases. Accordingly, the scale scores were determined as 41-73 with “no dependency”, 74-106 with “low dependency”, 107-139 with “moderate dependency”, 140-172 between “high dependency” and 173-205 between “very high dependency”. It can be said that nutrition and dietetics, physiotherapy and rehabilitation and nursing students are *less addicted* on social media. The level of dependence of the scores obtained from the SMAS and subscales is given in Appendix -4

While the total score obtained from the SMAS did not show statistically significant difference according to the department of study ( $p > 0.05$ ), significant differences were observed in the sub-dimensions of the scale.

While the mean score obtained from the occupation sub-dimension was 34.47 for nutrition and dietetics students, it was 35.74 for physical therapy and rehabilitation students and 31.35 for nursing students. According to these averages, it can be said that nutrition and dietetics students, physical therapy and rehabilitation students are **moderately addicted** while nursing students are **less addicted** in the occupation. So, there was a statistically significant difference in the occupational subscale according to the department ( $p = 0.013$ ;  $p < 0.05$ ). It was found that nursing students had lower occupancy scores than those who were studying in the physiotherapy and rehabilitation department ( $p = 0.001$ ;  $p < 0.01$ ). According to this, it can be said that when other department students want to spend more time on social media, their minds are more engaged with social media than nursing students.

There are 5 questions in the mood modification subscale, the lowest score is 5 and the highest score is 25. The average score of the students from this sub-scale is 12.40. The average score from the mood modification subscale was 12.46 for nutrition and dietetics students, 12.52 for physical therapy and rehabilitation, and 12.23 for nursing. When the addiction intervals are examined, it is seen that university students are **less addicted** on social media according to the mood modification subscale.

The relapse subscale consists of 5 questions and the scores can be varied between 5 and 25. The average score of the relapse subscale was 10.97, indicating that they were **less addicted** on social media.

Finally, the conflict subscale consists of 19 questions, the lowest score that can be taken from the scale is 19 and the highest score is 95. The average score from the conflict subscale was 32.93. The score falls into the non-addictive category and there is **no social media addiction** according to the conflict subscale of the students.

The mean BMIs of the students were nutrition and dietetics 21.16, physical therapy and rehabilitation 23.16 and nursing 21.56. Although the students in all departments were within the normal value range according to the BMI average, the students in the

physiotherapy and rehabilitation department had higher BMI values than the other groups. (p = 0.001; p <0.01).

**Table 4. 8. Correlation Analysis of BPS, SMAS and BMI.**

		1	2	3	4	5	6	7
1.BMI	r	1						
	p	-						
2.BPS	r	-0.088	1					
	p	0.167	-					
3. SMAS	r	0.027	-.207	1				
	p	0.672	<b>0.001**</b>	-				
4. SMAS Occupation	r	0.031	-.170	.830	1			
	p	0.63	<b>0.007**</b>	<b>0.001**</b>	-			
5. SMAS Mood Modification	r	-0.01	-.195	.763	.611	1		
	p	0.872	<b>0.002**</b>	<b>0.001**</b>	<b>0.001**</b>	-		
6. SMAS Relapse	r	0.024	-.134	.803	.551	.552	1	
	p	0.703	<b>0.035*</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	-	
7. SMAS Conflit	r	0.059	-.201	.882	.570	.566	.691	1
	p	0.352	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	<b>0.001**</b>	-

*Spearman's Correlation* \*\*p<0.01

Table 4.8. Shows the correlation analysis of BPS, SMAS and BMI. There was no statistically significant relationship between BMI and SMAS, sub-dimension of SMAS and BPS (p> 0.05).

There was a statistically significant negative and low correlation between BPS and SMAS ( $r = -0.207$ ;  $p < 0.01$ ). In other words, as the score obtained from BPS increases, the score obtained from SMAS. Social media reliance scores of participants with high body satisfaction were lower than those of other participants.

There was a very low and negative correlation between BPS and occupation ( $r = -0.170$ ;  $p < 0.01$ ). The occupancy sub-dimension expresses the intense thinking of social media activities and engagement of them. While the addiction increases in the occupation sub-dimension, body perception scores and body satisfaction decrease.

A statistically significant negative correlation was found between BPS and mood modification ( $r = -0,195$ ;  $p < 0.01$ ). Mood modification means that the person's use of social media applications changes in the state of emotion during these activities take place. According to the results of the analysis, as the addiction increases in the mood modification subscale, body perception decreases. In other words, it can be said that people who use social media to get rid of negative emotions have low body satisfaction.

A statistically significant negative correlation was found between BPS and relapse ( $r = -0,134$ ;  $p < 0.05$ ). Relapse refers to a tendency to avoid the use of social media or to return to previous patterns of activity after control behavior. According to the analysis, it can be said that while the addiction increases in the relapse sub-dimension, the score obtained from the body perception scale decreases and body satisfaction decreases.

There was a statistically significant negative correlation between BPS and conflict ( $r = -0.201$ ;  $p < 0.01$ ). Conflict means that social media activities contradict one's relationships, work / education and other activities, and that social media negatively affects one's life. According to the analysis, it can be said that while the dependency increases in the conflict aspect, the score obtained from the BPS decreases and body satisfaction decreases.

There was a high level and positive correlation between social media dependency scale and mood modification which is one of its sub-dimensions ( $r = 0.763$ ;  $p < 0.01$ ). There was a very high and positive relationship between SMAS and sub-dimension occupancy ( $r=0.830$ ;  $p<0.01$ ), a very high level and positive relationship between sub-dimension relapse ( $r=0,830$ ;  $p<0.01$ ) and a very high level and positive correlation between sub-dimension

conflict ( $r=0.882$ ;  $p<0.01$ ). These results are expected to be highly significant because the subscales of the scale have validity reliability.

**Table 4. 9. Comparison of Social Media Usage and Time Scales**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max</i> ( <i>Median</i> )	<i>p</i>
<b>BPS</b>	<b>1-3 Years</b>	26	156.23±20.09	113-192 (159)	<sup>b</sup> 0.117
	<b>4-6 Years</b>	86	146±24.5	84-194 (146)	
	<b>7 Years and Above</b>	136	147.13±28.29	40-200 (148)	
<b>SMAS Occupation</b>	<b>1-3 Years</b>	26	26.12±7.85	13-43 (26.5)	<sup>a</sup> <b>0.001*</b>
	<b>4-6 Years</b>	86	33.14±9.5	16-54 (34)	
	<b>7 Years and Above</b>	136	35.05±9.05	12-58 (36)	
<b>SMAS Mood Modification</b>	<b>1-3 Years</b>	26	10.42±3.55	5-19 (10)	<sup>b</sup> <b>0.046*</b>
	<b>4-6 Years</b>	86	12.48±4.66	5-25 (12.5)	
	<b>7 Years and Above</b>	136	12.7±4.58	5-23 (13)	
<b>SMAS Relapse</b>	<b>1-3 Years</b>	26	9.65±4.24	5-16 (10.5)	<sup>b</sup> 0.856
	<b>4-6 Years</b>	86	10.13±4.53	5-22 (10)	
	<b>7 Years and Above</b>	136	9.85±4.43	5-25 (9)	
<b>SMAS Conflict</b>	<b>1-3 Years</b>	26	31.04±13.75	19-70 (24)	<sup>b</sup> 0.404
	<b>4-6 Years</b>	86	32.57±12.59	19-71 (30)	
	<b>7 Years and Above</b>	136	33.06±12.5	19-74 (30.5)	
<b>SMAS</b>	<b>1-3 Years</b>	26	77.23±25	44-145 (78.5)	<sup>b</sup> <b>0.043*</b>
	<b>4-6 Years</b>	86	88.31±26.91	47-155 (82)	
	<b>7 Years and Above</b>	136	90.66±25.11	41-155 (89)	
<b>BMI</b>	<b>1-3 Years</b>	26	21.44±2.94	16.8-29.4 (20.95)	<sup>b</sup> 0.113
	<b>4-6 Years</b>	86	22.14±3.18	17.1-32.5 (21.8)	
	<b>7 Years and Above</b>	136	21,36±3,14	16,4-36,2 (20,9)	

<sup>a</sup>ANOVA Test. <sup>b</sup>Kruskall Wallis Test \* $p<0,05$  \*\* $p<0,01$

The duration of social media use did not show statistically significant difference according to BPS ( $p> 0.05$ ). It was found that the year of using social media applications is more or less, there is no significant relationship between the change in body perception or body satisfaction.

The duration of social media usage showed statistically significant difference according to SMAS ( $p = 0.043$ ;  $p < 0.05$ ). The mean score of SMAS was 77.23 for those whose social media usage period was between 1-3 years, whereas the mean score of SMAS was 88.1 those who were 4-6 years and 90.66 for those over 7 years. It was statistically significant that those who used 1-3 years of use were lower than the group whose SMAS was 7 years or more ( $p = 0.001$ ;  $p < 0.01$ ). Accordingly, it can be said that as social media usage time increases, the score obtained from the SMAS increases and the addiction on social media usage increases.

Social media usage time showed a statistically significant difference in the occupation sub-dimension. Groups that use social media between 1-3 years are less addicted on occupation sub-dimension, whereas groups that use social media over 4-6 years and 7 years are moderately dependent. It was found that the group using social media between 1-3 years was less dependent on the occupation sub-dimension than the other groups ( $p = 0.001$ ;  $p < 0.01$ ). In other words, it can be said that increasing the duration of social media usage increases the social media activities and addiction in the occupation sub-dimension.

The social media usage time mood modification subscale showed statistically significant difference ( $p = 0.046$ ;  $p < 0.05$ ) While the social media usage period is 1-3 years, the group is less addicted in the mood modification subdimension score, while the other groups can be evaluated at moderate addicted level. It was statistically significant that the mood modification dimension of the group whose social media usage period was 1-3 years was lower than the other groups ( $p = 0.001$ ;  $p < 0.01$ ). According to this, it can be said that the increase in the time spent in social media applications may be cause the increase in the desire to spend more time in social media, to keep the mind busy with social media and to spend long time using social media.

There was no statistically significant difference in terms of social media usage according to BMI ( $p > 0.05$ ).

It was found that 64.9% ( $n = 185$ ) of the participants in the study followed health-related accounts from social media applications. While 15.7% ( $n = 29$ ) of the participants applied the information they acquired on social media in their life, 61.6% ( $n = 114$ ) partially applied and 22.7% ( $n = 42$ ) did not.

**Table 4. 10. Comparison of the Scales According to the Application of Health-Related Information to Daily Life**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>Apply</i>	29	147,67±26,72	40-196 (146)	<sup>b</sup> 0.591
	<i>Partly Applying</i>	114	149,83±24,91	84-188 (151)	
	<i>Do Not apply</i>	42	148,02±25,28	74-200 (148)	
<b>SMAS Occupati on</b>	<i>Apply</i>	29	33.45±9.75	16-54 (33)	<sup>a</sup> 0.920
	<i>Partly Applying</i>	114	34.21±8.84	13-54 (36)	
	<i>Do Not apply</i>	42	34.12±8.91	14-54 (34)	
<b>SMAS Mood Modifica tion</b>	<i>Apply</i>	29	12.79±4.47	5-25 (13)	<sup>b</sup> 0.940
	<i>Partly Applying</i>	114	12.45±4.33	5-24 (13)	
	<i>Do Not apply</i>	42	12.71±4.66	5-21 (12.5)	
<b>SMAS Relapse</b>	<i>Apply</i>	29	9.79±4.25	5-21 (8)	<sup>b</sup> 0.674
	<i>Partly Applying</i>	114	10.02±4.25	5-22 (10)	
	<i>Do Not apply</i>	42	9.14±3.68	5-16 (8)	
<b>SMAS Conflict</b>	<i>Apply</i>	29	30.14±10.37	19-57 (29)	<sup>b</sup> 0.377
	<i>Partly Applying</i>	114	33.5±12.95	19-73 (32)	
	<i>Do Not apply</i>	42	33.1±11.23	19-70 (31.5)	
<b>SMAS</b>	<i>Apply</i>	29	86.17±22.89	46-154 (88)	<sup>b</sup> 0.817
	<i>Partly Applying</i>	114	90.17±25.79	44-155 (86)	
	<i>Do Not apply</i>	42	89.07±23.32	48-145 (89)	
<b>BMI</b>	<i>Apply</i>	29	21.24±3.78	17.5-36.2 (20.6)	<sup>b</sup> 0.310
	<i>Partly Applying</i>	114	21.72±2.9	16.4-33.5 (21.6)	
	<i>Do Not apply</i>	42	21.43±2.89	16.8-32.5 (21)	

<sup>a</sup>ANOVA Test. <sup>b</sup>Kruskall Wallis Test \**p*<0,05 \*\**p*<0,01

According to Table 4.10, there are 29 people who apply the information obtained from health-related accounts in social media in their daily lives, while 42 people who do not apply it and 114 people who partially apply it. BPS, SMAS and BMI did not show statistically significant differences according to the application of social media information (*p*> 0.05).

**Table 4. 11. Comparison of Scales by Gender**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max</i> <i>(Median)</i>	<i>p</i>
<i>BPS</i>	<i>Women</i>	227	147.27±26.41	40-200 (147)	<sup>a</sup> 0.184
	<i>Men</i>	22	152±25.69	80-198 (155.5)	
<i>SMAS</i> <i>Occupation</i>	<i>Women</i>	227	33.49±9.44	12-58 (34)	<sup>a</sup> 0.833
	<i>Men</i>	22	33.05±9.72	16-49 (31)	
<i>SMAS</i> <i>Mood Modification</i>	<i>Women</i>	227	12.48±4.5	5-25 (13)	<sup>b</sup> 0.317
	<i>Men</i>	22	11.36±5	5-19 (10.5)	
<i>SMAS</i> <i>Relapse</i>	<i>Women</i>	227	9.86±4.24	5-25 (9)	<sup>a</sup> 0.929
	<i>Men</i>	22	10.64±6.18	5-22 (8.5)	
<i>SMB_</i> <i>Conflict</i>	<i>Women</i>	227	32.31±11.73	19-73 (30)	<sup>a</sup> 0.948
	<i>Men</i>	22	36.41±19.64	19-74 (25)	
<i>SMAS</i>	<i>Women</i>	227	88.15±24.53	41-155 (86)	<sup>a</sup> 0.756
	<i>Men</i>	22	91.45±38.22	47-155 (74)	
<i>BMI</i>	<i>Women</i>	227	21.24±2.84	16.4-36.2 (20.75)	<sup>a</sup> <b>0.001**</b>
	<i>Men</i>	22	25.94±3.23	19.2-33.2 (24.8)	

<sup>a</sup>Student T Testi. <sup>b</sup>Mann Whiteny U Testi      \**p*<0.05    \*\**p*<0.01

Comparison of scales by gender shows in Table 4.11. BPS according to gender and social media addiction subscales did not show statistically significant difference (*p*> 0.05). Men's BMI was higher than women (*p* = 0.001; *p* <0.01).

**Table 4. 12. Comparison of Scales by Alcohol Use**

		<i>N</i>	<i>Mean± Sd</i>	<i>Min-Max</i> <i>(Median)</i>	<i>p</i>
<i>BPS</i>	<i>No</i>	135	147.26±24.76	40-192 (149)	<sup>b</sup> 0.929
	<i>Yes</i>	112	148.2±28.2	84-200 (148)	
<i>SMAS</i> <i>Occupation</i>	<i>No</i>	135	31.94±9.39	12-54 (31)	<sup>a</sup> <b>0.006*</b>
	<i>Yes</i>	112	35.26±9.23	14-58 (36)	
<i>SMAS</i> <i>Mood Modification</i>	<i>No</i>	135	11.68±4.39	5-24 (12)	<sup>b</sup> <b>0.011*</b>
	<i>Yes</i>	112	13.22±4.61	5-25 (13)	
<i>SMAS</i> <i>Relapse</i>	<i>No</i>	135	9.56±4.09	5-22 (9)	<sup>b</sup> 0.249
	<i>Yes</i>	112	10.36±4.79	5-25 (10)	



		<i>N</i>	<i>Mean ± Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<i>SMAS Conflict</i>	<i>No</i>	135	31.17±11.57	19-71 (29)	<sup>b</sup> 0.051
	<i>Yes</i>	112	34.48±13.62	19-74 (32)	
<i>SMAS</i>	<i>No</i>	135	84.36±24.71	41-151 (81)	<sup>b</sup> 0.008*
	<i>Yes</i>	112	93.32±26.64	43-155 (94)	
<i>BMI</i>	<i>No</i>	135	21.62±3.21	16.8-36.2 (21.1)	<sup>b</sup> 0.852
	<i>Yes</i>	112	21.65±3.09	16.4-32.5 (21.1)	

<sup>a</sup>Student T Testi. <sup>b</sup>Mann Whiteny U Testi \**p*<0,05 \*\**p*<0,01

While 54.4% (n = 135) of the participants did not use alcohol, 45.6% (n = 113) did.

Table 4.12 shows the comparison of alcohol use with the scales. The average SMAS score was 84.36 for non-alcohol participants and 93.32 for alcohol users, and their social media addiction was less addicted. It can be said that alcohol users have higher score than those who did not use in SMAS (*p* = 0.008; *p* <0.01).

The occupation subscale scores of alcohol users were 35.26 and they moderately addicted and also their score higher than those who did not use alcohol 31.94 (*p* = 0.006; *p* <0.01). It can be said that alcohol users more active in social media than non alcohol users. Participants using alcohol scored 35.26 on the occupational scale and were moderately dependent. It can be said that alcohol users are more engaged in social media applications than non-users.

It was statistically significant that alcohol users had higher mood modification subscale scores than those who did not. The mean of mood modification subscale of the participants who did not use alcohol is 11.68 and they are **less dependent** in this subscale. The scores of the participants using alcohol were 13.22 and were **moderately dependent**. According to the results of the analysis, it can be said that alcohol users more often use social media to forget their problems, avoid negative thoughts and loneliness than the ones who do not use alcohol.

While 69.9% (n = 174) of the participants did not smoke, 26.2% (n = 65) smoked and 3.6% (n = 9) quit.

**Table 4. 13. Comparison of Scales by Smoking Status**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	174	148.34±24.07	74-189 (150)	<sup>b</sup> 0.83
	<i>Yes</i>	65	145.93±21.1	98-192 (144)	
	<i>Quit</i>	9	156.57±35.42	104-198 (145)	
<b>SMAS Occupation</b>	<i>No</i>	174	33.69±9.67	13-58 (34)	<sup>a</sup> 0.533
	<i>Yes</i>	65	37.12±8.3	15-54 (38.5)	
	<i>Quit</i>	9	31±10.31	14-46 (30)	
<b>SMAS Mood Modification</b>	<i>No</i>	174	11.99±4.61	5-22 (12)	<sup>b</sup> 0.66
	<i>Yes</i>	65	13.76±4.81	5-25 (14)	
	<i>Quit</i>	9	12.14±3.53	5-16 (12)	
<b>SMAS Relapse</b>	<i>No</i>	174	10.08±4.84	5-25 (10)	<sup>b</sup> 0.13
	<i>Yes</i>	65	11.19±4.54	5-22 (11.5)	
	<i>Quit</i>	9	5.71±0.95	5-7 (5)	
<b>SMAS Conflict</b>	<i>No</i>	174	31.91±11.92	19-71 (30)	<sup>b</sup> 0.08
	<i>Yes</i>	65	36.17±14.07	19-74 (34)	
	<i>Quit</i>	9	27.43±12.69	19-54 (21)	
<b>SMAS</b>	<i>No</i>	174	87.67±26.51	44-151 (84)	<sup>b</sup> 0.28
	<i>Yes</i>	65	98.24±26.36	53-155 (100.5)	
	<i>Quit</i>	9	76.29±24.54	43-122 (69)	
<b>BMI</b>	<i>No</i>	174	22.02±3.18	16.4-36.2 (21.6)	<sup>b</sup> 0.05
	<i>Yes</i>	65	21.51±3.19	17-33.2 (20.95)	
	<i>Quit</i>	9	19.21±1.15	17.4-20.5 (19.4)	

<sup>a</sup>ANOVA Test. <sup>b</sup>Kruskall Wallis Test \**p*<0.05 \*\**p*<0.01

Table 4.13 shows the comparison of smoking status with the scales. Accordingly, there are 65 smokers, 174 non-smokers, and 9 participants who quit smoking. Regarding smoking status, students are thought to be conscious about the subject because they read in health related departments. Body perception index did not show statistically significant difference according to smoking status ( $p > 0.05$ ). Social media dependency scale and its sub-dimensions did not show statistically significant difference ( $p > 0.05$ ). BMI did not show statistically significant difference according to smoking status. ( $p > 0.05$ ).

**Table 4. 14. Comparison of Scales by Doing Exercise Status**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	163	147.67±22.7	80-200 (147)	<sup>b</sup> 0.318
	<i>Yes</i>	85	147.15±32.36	40-200 (150.5)	
<b>SMAS</b> <b>Occupation</b>	<i>No</i>	163	33.54±9.43	12-54 (34)	<sup>a</sup> 0.735
	<i>Yes</i>	85	33.11±9.42	14-58 (34)	
<b>SMAS</b> <b>Mood Modification</b>	<i>No</i>	163	12.81±4.59	5-25 (13)	<sup>b</sup> <b>0.044*</b>
	<i>Yes</i>	85	11.52±4.3	5-22 (11.5)	
<b>SMAS</b> <b>Relapse</b>	<i>No</i>	163	9.78±4.47	5-22 (9)	<sup>b</sup> 0.392
	<i>Yes</i>	85	10.2±4.34	5-25 (10)	
<b>SMAS</b> <b>Conflict</b>	<i>No</i>	163	32.65±12.12	19-73 (30)	<sup>b</sup> 0.653
	<i>Yes</i>	85	32.87±13.69	19-74 (29.5)	
<b>SMAS</b>	<i>No</i>	163	88.78±26.26	41-155 (86)	<sup>b</sup> 0.834
	<i>Yes</i>	85	87.7±25.34	43-154 (84)	
<b>BMI</b>	<i>No</i>	163	21.49±3.14	16.4-36.2 (21)	<sup>b</sup> 0.340
	<i>Yes</i>	85	21.86±3.22	16.8-33.5 (21.1)	

<sup>a</sup>Student T Testi. <sup>b</sup>Mann Whitney U Testi \**p*<0,05 \*\**p*<0,01

Table 4.14 shows comparison of scales by exercise status. While the number of participants who doing exercise was 85 (34.3%), participants who not exercise was 163 (65.7%). The scores of the BPS according to SMAS and BMI did not show statistically significant difference (*p*> 0.05).

It was found statistically significant that the mood modification scale scores of the participants were lower than those who did not exercise (*p* = 0,044; *p* <0.05). It can be said that the score of those who do not exercise is close to moderate dependence (12.81), while those who exercise are less dependent than the mean score in the mood subscale (11.52). According to this result, it can be said that Non-exercise participants use social media more to change mood.

While 43.5% (*n* = 37) of the participants were walking as exercise, 7.1% (*n* = 6) running, 3.5% (*n* = 3) swimming, 9.4% (*n* = 8) do pilates, 21.2% (*n* = 18) do fitness and 15.3% (*n* = 13) do other exercises

**Table 4. 15. Comparison of Scales by Type of Exercise**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max</i> ( <i>Median</i> )	<i>p</i>
<b>BPS</b>	<b>Walking</b>	37	144.92±30.54	40-200 (146)	<sup>b</sup> 0.816
	<b>Running</b>	6	147.33±44.73	74-196 (148.5)	
	<b>Swimming</b>	3	153.67±17.56	137-172 (152)	
	<b>Pilates</b>	8	152±22,77	110-175 (156,5)	
	<b>Fitness</b>	18	144,56±26,69	84-192 (149,5)	
	<b>Other</b>	13	156,23±27,32	108-189 (164)	
<b>SMAS Occupation</b>	<b>Walking</b>	37	30.46±8.3	14-46 (31)	<sup>a</sup> 0.081
	<b>Running</b>	6	29.33±11.04	14-43 (29)	
	<b>Swimming</b>	3	41.67±14.22	32-58 (35)	
	<b>Pilates</b>	8	36.85±8.58	16-47 (40)	
	<b>Fitness</b>	18	35±7.63	23-45 (34.5)	
	<b>Other</b>	13	35.17±10.22	14-54 (35.5)	
<b>SMAS Mood Modification</b>	<b>Walking</b>	37	11.03±3.61	5-19 (10)	<sup>b</sup> 0.376
	<b>Running</b>	6	9.5±5.05	5-15 (8.5)	
	<b>Swimming</b>	3	14±7.94	5-20 (17)	
	<b>Pilates</b>	8	13.23±3.35	6-18 (13)	
	<b>Fitness</b>	18	10.5±3.12	6-15 (10.5)	
	<b>Other</b>	13	11.83±5.57	5-22 (11)	
<b>SMAS Relapse</b>	<b>Walking</b>	37	9.89±4.14	5-18 (8)	<sup>b</sup> 0.339
	<b>Running</b>	6	9±4.47	5-16 (8)	
	<b>Swimming</b>	3	12±4.58	7-16 (13)	
	<b>Pilates</b>	8	12±3.7	5-15 (13)	
	<b>Fitness</b>	18	11.5±6.89	5-25 (11.5)	
	<b>Other</b>	13	8.78±3.61	5-18 (8)	
<b>SMAS Conflict</b>	<b>Walking</b>	37	32.46±14.1	19-74 (28)	<sup>b</sup> 0.267
	<b>Running</b>	6	27.17±7.7	19-37 (26.5)	
	<b>Swimming</b>	3	33.33±20.65	19-57 (24)	
	<b>Pilates</b>	8	39.77±15.73	20-70 (35)	
	<b>Fitness</b>	18	34.88±12.05	20-57 (33)	
	<b>Other</b>	13	29.06±11.58	19-56 (24.5)	
<b>SMAS</b>	<b>Walking</b>	37	83.84±23.47	48-154 (79)	<sup>b</sup> 0.185
	<b>Running</b>	6	75±25.95	43-104 (73.5)	
	<b>Swimming</b>	3	101±32.97	63-122 (118)	
	<b>Pilates</b>	8	101.85±26.72	47-145 (100)	
	<b>Fitness</b>	18	91.88±23.64	60-124 (87)	
	<b>Other</b>	13	84.83±25.42	44-146 (85)	

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BMI</b>	<i>Walking</i>	37	21,96±2,99	18,2-29,4 (20,8)	<sup>b</sup> 0.754
	<i>Running</i>	6	21,56±2,2	18-24,2 (21,9)	
	<i>Swimming</i>	3	22,5±1,22	21,1-23,3 (23,1)	
	<i>Pilates</i>	8	22,04±2,83	17,1-27,1 (21,1)	
	<i>Fitness</i>	18	20,3±1,93	17,5-22,7 (20,75)	
	<i>Other</i>	13	22,49±4,64	16,8-33,5 (22,06)	

<sup>a</sup>ANOVA Testi. <sup>b</sup>Kruskall Wallis Testi \**p*<0,05 \*\**p*<0,01

Table 4.15 shows the distribution of exercise types. BPS did not show statistically significant difference according to exercise types (*p*> 0.05). SMAS and its sub-dimensions did not show statistically significant difference according to exercise types (*p*> 0.05). BMI did not show statistically significant difference according to exercise types (*p*<0.05).

**Table 4. 16. Comparison of the scales according to the presence of obese individuals in the family**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	123	148,62±26,33	40-200 (151)	<sup>b</sup> 0.350
	<i>Yes</i>	125	147,42±23,71	80-200 (146)	
<b>SMAS Occupation</b>	<i>No</i>	123	32,67±9,64	13-58 (33)	<sup>a</sup> 0.195
	<i>Yes</i>	125	34,22±9,22	12-54 (34)	
<b>SMAS Mood Modification</b>	<i>No</i>	123	12,21±4,43	5-23 (13)	<sup>b</sup> 0.710
	<i>Yes</i>	125	12,55±4,68	5-25 (13)	
<b>SMAS Relapse</b>	<i>No</i>	123	10,04±4,44	5-25 (10)	<sup>b</sup> 0.694
	<i>Yes</i>	125	9,82±4,44	5-22 (9)	
<b>SMAS Conflict</b>	<i>No</i>	123	32,51±12,03	19-73 (30)	<sup>b</sup> 0.853
	<i>Yes</i>	125	32,84±13,23	19-74 (30)	
<b>SMAS</b>	<i>No</i>	123	87,43±25,35	43-155 (86)	<sup>b</sup> 0.741
	<i>Yes</i>	125	89,43±26,58	41-155 (85)	
<b>BMI</b>	<i>No</i>	123	21,18±2,99	16,8-36,2 (20,6)	<sup>b</sup> 0.012*
	<i>Yes</i>	125	22,09±3,24	16,4-33,5 (21,5)	

<sup>a</sup>Student T Test. <sup>b</sup>Mann Whiteny U Test \**p*<0,05 \*\**p*<0,01

While 49.6% (n = 123) of the participants had no obese individuals in their family, 50.4% (n = 125) were present.

Table 4.16 shows the comparison of the scales according to the presence of obese individuals in the family. BPS did not show statistically significant difference according to family obesity ( $p > 0.05$ ). SMAS and its sub-dimensions did not show statistically significant differences according to family obesity ( $p > 0.05$ ). It was found statistically significant that BMI was higher in obese family members than those without obesity ( $p = 0,012$ ;  $p < 0.05$ ).

**Table 4. 17. Comparison of Scales According to Chronic Disease**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	219	148,65±26,73	40-200 (149)	<sup>b</sup> 0.025*
	<i>Yes</i>	29	140,41±22,2	104-192 (138)	
<b>SMAS</b>	<i>No</i>	219	33,43±9,4	14-58 (34)	<sup>a</sup> 0.935
<b>Occupation</b>	<i>Yes</i>	29	33,59±9,96	12-47 (36)	
<b>SMAS</b>	<i>No</i>	219	12,33±4,59	5-25 (12)	<sup>b</sup> 0.444
	<b>Mood Modification</b>	<i>Yes</i>	29	12,79±4,28	
<b>SMAS</b>	<i>No</i>	219	10,04±4,51	5-25 (10)	<sup>b</sup> 0.455
	<b>Relapse</b>	<i>Yes</i>	29	9,07±3,76	
<b>SMAS</b>	<i>No</i>	219	32,68±12,56	19-74 (30)	<sup>b</sup> 0.714
	<b>Conflict</b>	<i>Yes</i>	29	32,66±13,38	
<b>SMAS</b>	<i>No</i>	219	88,48±25,95	43-155 (86)	<sup>b</sup> 0.973
	<i>Yes</i>	29	88,1±26,33	41-133 (83)	
<b>BMI</b>	<i>No</i>	219	21,57±3,12	16,4-33,5 (21,1)	<sup>b</sup> 0.465
	<i>Yes</i>	29	22,08±3,44	18,6-36,2 (21,3)	

<sup>a</sup>Student T Testi. <sup>b</sup>Mann Whiteny U Testi \* $p < 0.05$  \*\* $p < 0.01$

Table 4.17 shows the status of chronic disease and comparison of scales. It was found statistically significant that the patients with chronic disease have lower body perception than the patients without chronic disease ( $p = 0.025$ ;  $p < 0.05$ ). It can be said that having chronic disease decreases body satisfaction. BMI, SMAS and its sub-dimensions did not show statistically significant differences according to having a chronic disease ( $p > 0.05$ ).

**Table 4. 18. Comparison of Scales by Drug Use**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	208	148,3±27,14	40-200 (149)	<sup>b</sup> 0.197
	<i>Yes</i>	40	144,5±21,66	98-196 (145)	
<b>SMAS</b>	<i>No</i>	208	33,62±9,55	12-58 (34)	<sup>a</sup> 0.523
<b>Occupation</b>	<i>Yes</i>	40	32,58±8,94	13-47 (34,5)	

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<i>SMAS</i>	<i>No</i>	208	12,27±4,55	5-25 (12,5)	<sup>b</sup> 0.294
<i>Mood Modification</i>	<i>Yes</i>	40	12,98±4,57	5-23 (13)	
<i>SMAS</i>	<i>No</i>	208	9,95±4,56	5-25 (9)	<sup>b</sup> 0.703
<i>Relapse</i>	<i>Yes</i>	40	9,83±3,71	5-16 (9,5)	
<i>SMAS</i>	<i>No</i>	208	32,71±12,97	19-74 (29,5)	<sup>b</sup> 0.738
<i>Conflict</i>	<i>Yes</i>	40	32,53±10,84	19-57 (32)	
<i>SMAS</i>	<i>No</i>	208	88,54±26,42	41-155 (85)	<sup>b</sup> 0.860
	<i>Yes</i>	40	87,9±23,58	43-140 (89)	
<i>BMI</i>	<i>No</i>	208	21,61±3,23	16,8-36,2 (20,8)	<sup>b</sup> 0.451
	<i>Yes</i>	40	21,76±2,74	16,4-32,5 (21,55)	

<sup>a</sup>Student T Testi <sup>b</sup>Mann Whiteny U Testi \**p*<0.05 \*\**p*<0.01

Table 4.18 show a comparison of scales by drug use. BPS did not show statistically significant difference according to drug use (*p*> 0.05). BMI, SMAS and its sub-dimensions did not show statistically significant difference according to drug use (*p*> 0.05).

**Table 4. 19. Comparison of Scales by Psychiatric Disorder**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<i>BPS</i>	<i>No</i>	234	148,52±25,58	74-200 (149)	<sup>b</sup> 0.115
	<i>Yes</i>	14	133,86±35,06	40-187 (141,5)	
<i>SMAS</i>	<i>No</i>	234	33,38±9,57	12-58 (34)	<sup>a</sup> 0.608
<i>Occupation</i>	<i>Yes</i>	14	34,71±7,24	16-45 (35)	
<i>SMAS</i>	<i>No</i>	234	12,27±4,46	5-25 (13)	<sup>b</sup> 0.092
<i>Mood Modification</i>	<i>Yes</i>	14	14,29±5,64	5-23 (15,5)	
<i>SMAS</i>	<i>No</i>	234	9,93±4,45	5-25 (9)	<sup>b</sup> 0.894
<i>Relapse</i>	<i>Yes</i>	14	9,86±4,35	5-16 (8)	
<i>SMAS</i>	<i>No</i>	234	32,4±12,7	19-74 (29)	<sup>b</sup> 0.047*
<i>Conflict</i>	<i>Yes</i>	14	37,29±10,69	19-57 (35)	
<i>SMAS</i>	<i>No</i>	234	87,98±26,13	41-155 (84)	<sup>b</sup> 0.142
	<i>Yes</i>	14	96,14±22,06	45-140 (99)	
<i>BMI</i>	<i>No</i>	234	21,59±3,12	16,4-36,2 (21)	<sup>b</sup> 0.460
	<i>Yes</i>	14	22,35±3,71	17,9-32,5 (21,65)	

<sup>a</sup>Student T Testi <sup>b</sup>Mann Whiteny U Testi \**p*<0.05 \*\**p*<0.01

Table 4.19 shows psychiatric disorders and scale comparisons. BPS and BMI did not show statistically significant difference according to psychiatric disorder. SMAS does not show statistically significant difference according to psychiatric disorder. (*P*> 0.05). It was

found statistically significant that those who had psychiatric disorders were higher than those who had no conflict subscale score. ( $p = 0.047$ ;  $p < 0.05$ ) While the participants without psychiatric disease were not addicted with the score of 32.4 in the conflict subscale, it was seen that the patients with psychiatric disease were less addicted in the conflict subscale with 37.29. According to these results, it can be said that the use of social media in psychiatric patients affects their daily lives (work, close family relations, physical problems, sleep disorder) more than those without psychiatric diseases.

**Table 4. 20. Comparison of Scales by Meal Skipping Status**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>No</i>	88	149,16±28,76	84-200 (149)	<sup>b</sup> 0.602
	<i>Yes</i>	160	147,14±24,97	40-198 (148)	
<b>SMAS Occupation</b>	<i>No</i>	88	30,87±9,24	12-52 (30)	<sup>a</sup> <b>0.001**</b>
	<i>Yes</i>	160	34,86±9,33	13-58 (36)	
<b>SMAS Mood Modification</b>	<i>No</i>	88	11,9±4,25	5-21 (12)	<sup>b</sup> 0.228
	<i>Yes</i>	160	12,66±4,68	5-25 (13)	
<b>SMAS Relapse</b>	<i>No</i>	88	9,21±3,78	5-20 (8)	<sup>b</sup> 0.178
	<i>Yes</i>	160	10,3±4,73	5-25 (10)	
<b>SMAS Conflict</b>	<i>No</i>	88	31,3±11,98	19-70 (29)	<sup>b</sup> 0.199
	<i>Yes</i>	160	33,36±12,99	19-74 (31)	
<b>SMAS</b>	<i>No</i>	88	83,28±23,61	41-145 (80)	<sup>b</sup> <b>0.027*</b>
	<i>Yes</i>	160	91,18±26,86	43-155 (91)	
<b>BMI</b>	<i>No</i>	88	21,53±3,18	16,8-33,5 (20,75)	<sup>b</sup> 0.609
	<i>Yes</i>	160	21,69±3,17	16,4-36,2 (21,3)	

<sup>a</sup>Student T Test. <sup>b</sup>Mann Whitney U Test

\* $p < 0.05$  \*\* $p < 0.01$

Table 4.20 shows the scale assignment status of the meal assignment. BPS and BMI did not show statistically significant difference according to meal skipping status ( $p > 0.05$ ). There are 88 participants who do not skip meals and 160 participants who skip meals. It was found statistically significant that social media addiction scores of the people who skipped meals were higher than those who did not skip the meal ( $p = 0.027$ ;  $p < 0.05$ ). According to the results, while the higher the social media addiction score, the higher the meal skipping level of the participants.



It was found statistically significant that occupation subscale scores of the people who skipped meals were higher than those who did not skip the meals. ( $p=0.001$ ;  $p<0.01$ ) While the non-skipping group was less addicted in the occupational subscale with 30.87, the skipping group was moderately addicted with 34.86 points. Accordingly, while the occupation of social media usage increases, the status of skipping meals increases.

**Table 4. 21. Skipped Meal Type Comparison of Scales**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<i>BPS</i>	<i>Breakfast</i>	93	148,34±24,07	74-189 (150)	<sup>b</sup> 0.453
	<i>Lunch</i>	58	145,93±21,1	98-192 (144)	
	<i>Dinner</i>	7	156,57±35,42	104-198 (145)	
<i>SMAS Occupation</i>	<i>Breakfast</i>	93	33,69±9,67	13-58 (34)	<sup>a</sup> 0.051
	<i>Lunch</i>	58	37,12±8,3	15-54 (38,5)	
	<i>Dinner</i>	7	31±10,31	14-46 (30)	
<i>SMAS Mood Modification</i>	<i>Breakfast</i>	93	11,99±4,61	5-22 (12)	<sup>b</sup> 0.076
	<i>Lunch</i>	58	13,76±4,81	5-25 (14)	
	<i>Dinner</i>	7	12,14±3,53	5-16 (12)	
<i>SMAS Relapse</i>	<i>Breakfast</i>	93	10,08±4,84	5-25 (10)	<sup>b</sup> 0.006**
	<i>Lunch</i>	58	11,19±4,54	5-22 (11,5)	
	<i>Dinner</i>	7	5,71±0,95	5-7 (5)	
<i>SMAS Conflict</i>	<i>Breakfast</i>	93	31,91±11,92	19-71 (30)	<sup>b</sup> 0.039*
	<i>Lunch</i>	58	36,17±14,07	19-74 (34)	
	<i>Dinner</i>	7	27,43±12,69	19-54 (21)	
<i>SMAS</i>	<i>Breakfast</i>	93	87,67±26,51	44-151 (84)	<sup>b</sup> 0.017*
	<i>Lunch</i>	58	98,24±26,36	53-155 (100,5)	
	<i>Dinner</i>	7	76,29±24,54	43-122 (69)	
<i>BMI</i>	<i>Breakfast</i>	93	22,02±3,18	16,4-36,2 (21,6)	<sup>b</sup> 0.021
	<i>Lunch</i>	58	21,51±3,19	17-33,2 (20,95)	
	<i>Dinner</i>	7	19,21±1,15	17,4-20,5 (19,4)	

<sup>a</sup>ANOVA Tesi. <sup>b</sup>Kruskall Wallis Tesi

\* $p<0.05$  \*\* $p<.,01$

BPS did not show statistically significant difference according to skipped meal ( $p>0.05$ ).

There was a statistically significant difference in BMI according to skipped meal ( $p = 0,021$ ;  $p < 0.05$ ). BMI of the people who skipped dinner was lower than those who skipped the other meals ( $p = 0.001$ ;  $p < 0.01$ ).

SMAS showed a significant difference according to skipped meal type ( $p = 0.017$ ;  $p < 0.05$ ). It was found that the scores obtained from the SMAS of those who skipped lunch were higher than those who skipped breakfast ( $p = 0.001$ ;  $p < 0.01$ ). According to this result, it can be said that the rate of skipping meals increases with increasing social media usage and time spent during the day.

It was found that the relapse sub-dimension showed statistically significant difference compared to the skipped meal ( $p = 0.006$ ;  $p < 0.01$ ). The group that skipped dinner was not addicted in the relapse subdimension, while the other groups were less addicted. The relapse score of those who skipped dinner was lower than those who skipped other meals ( $p = 0.001$ ;  $p < 0.01$ ). The group that skipped dinner was less likely to restrict themselves from social media activities than the other groups.

There was a statistically significant difference in conflict subscale according to skipped meal ( $p = 0.039$ ;  $p < 0.05$ ). The group that skipped dinner was not addicted in the conflict subdimension, while the lunch groups were less addicted ( $p = 0.001$ ;  $p < 0.01$ ). The group that skipped dinner was less likely to be negatively affected from social media activities in daily life than the other groups.

While 6.9% ( $n = 17$ ) of the participants were fed fast food 1-3 times a day, 27.9% ( $n = 69$ ) were 2-6 times a week and 57.1% ( $n = 141$ ) once a week and less and 8.1% ( $n = 20$ ) do not consume any fast food.

**Table 4. 22. Fastfood Consumption Frequency Comparison of Scales**

		<i>N</i>	<i>Mean±Sd</i>	<i>Min-Max (Median)</i>	<i>p</i>
<b>BPS</b>	<i>1-3 Times a Day</i>	17	141.88±20.27	107-183 (142)	<b><i>b0.004**</i></b>
	<i>2-6 Times a Week</i>	69	146.19±26.26	40-198 (146)	
	<i>1 or less per week</i>	141	146.57±27.11	84-200 (147)	
	<i>Never Consumed</i>	20	165.15±20.3	116-200 (162.5)	
<b>SMAS Occupation</b>	<i>1-3 Times a Day</i>	17	38.29±7.14	24-50 (37)	<b><i>a0.007**</i></b>
	<i>2-6 Times a Week</i>	69	35.09±9.31	14-58 (36)	
	<i>1 or less per week</i>	141	32.84±9.34	13-54 (32)	
	<i>Never Consumed</i>	20	28.85±9.56	12-46 (29.5)	
<b>SMAS Mood Modification</b>	<i>1-3 Times a Day</i>	17	14.82±4.32	5-23 (15)	<b><i>b0.002**</i></b>
	<i>2-6 Times a Week</i>	69	13.19±4.01	5-21 (14)	
	<i>1 or less per week</i>	141	12.06±4.71	5-25 (12)	
	<i>Never Consumed</i>	20	9.8±4.06	5-17 (8.5)	
<b>SMAS Relapse</b>	<i>1-3 Times a Day</i>	17	13.53±5.06	5-22 (15)	<b><i>b0.002**</i></b>
	<i>2-6 Times a Week</i>	69	10.59±4.16	5-18 (10)	
	<i>1 or less per week</i>	141	9.38±4.19	5-25 (8)	
	<i>Never Consumed</i>	20	8.65±4.92	5-21 (6)	
<b>SMAS Conflict</b>	<i>1-3 Times a Day</i>	17	45.24±17.83	19-71 (47)	<b><i>b0.001**</i></b>
	<i>2-6 Times a Week</i>	69	35.32±12.61	19-74 (34)	
	<i>1 or less per week</i>	141	30.72±10.91	19-73 (29)	
	<i>Never Consumed</i>	20	26.85±11.29	19-59 (24)	
<b>SMAS</b>	<i>1-3 Times a Day</i>	17	111.88±31.73	57-155 (116)	<b><i>b0.001**</i></b>
	<i>2-6 Times a Week</i>	69	94.19±24.13	43-154 (93)	
	<i>1 or less per week</i>	141	85.01±23.95	44-155 (82)	
	<i>Never Consumed</i>	20	74.15±25.38	41-138 (67.5)	
<b>BMI</b>	<i>1-3 Times a Day</i>	17	22.49±3.46	17.7-30.6 (21.7)	<b><i>b0.417</i></b>
	<i>2-6 Times a Week</i>	69	21.91±3.43	16.4-33.2 (21.3)	
	<i>1 or less per week</i>	141	21.49±2.85	16.8-36.2 (21.1)	
	<i>Never Consumed</i>	20	21.18±3.92	17.5-33.5 (20.06)	

<sup>a</sup>ANOVA Test. <sup>b</sup>Kruskall Wallis Test

\**p*<0.05 \*\**p*<0.01

BPS showed a significant difference according to the frequency of fastfood nutrition (*p* = 0.004; *p* <0.01). It was found that the BPS score of the never consuming group was higher than the other groups (*p* = 0.001; *p* <0.01).

According to fastfood consumption frequency, social media addiction scores differ significantly ( $p = 0.001$ ;  $p < 0.01$ ). Those who consumed fastfood 1-3 times a day were moderately dependent on the social media addiction score, while the other groups were less addicted. It can be said that the score obtained from the group that does not consume any fastfood is close to the state of no addiction. It was found that social media addiction score of fastfood consumed 1-3 times a day was higher than 2-6 times a week compared to the group that did not consume 1 or less and none at all per week ( $p = 0.001$ ;  $p < 0.01$ ). Social media addiction scores of fastfood consumers 1 or less per week were higher than those who never consumed ( $p = 0.001$ ;  $p < 0.01$ ). According to these results, fast food consumption increases as social media addiction increases.

According to fastfood consumption frequency, occupational subscale scores differed statistically ( $p = 0.007$ ;  $p < 0.01$ ). It was statistically significant that the occupation score of the group consuming fastfood 1-3 times a day was higher than those who never consumed ( $p = 0.001$ ;  $p < 0.01$ ). Those who consume fastfood 1-3 times a day are moderately addicted. in the occupation sub-dimension, whereas those who never consume fastfood are less addicted. It can be said that the increase in social media activities increases the consumption of fast food.

Mood modification subscale scores were significantly different according to fastfood consumption frequency ( $p = 0.002$ ;  $p < 0.01$ ). It was found that mood modification scores of fastfood consumers 1-3 times and 2-6 times daily were higher than 1 or less and never consumed group ( $p = 0.001$ ;  $p < 0.01$ ). 1-3 times per day and 2-6 times fastfood consuming mood modification sub-dimension is moderately addicted, while those who never consumed fast food is less addicted. According to this, it can be said that the consumption of fast food is increased by those who use social media to regulate their mood.

According to fastfood consumption frequency, relapse subscale scores showed statistically significant difference ( $p = 0.002$ ;  $p < 0.01$ ). It was found that the relapse score of the ones who consumed fastfood 1-3 times a day, 2-6 times a week, 1 or less per week and higher than the non-consuming group was statistically significant ( $p = 0.001$ ;  $p < 0.01$ ). Those who consumed fastfood 1-3 times a day, 2-6 times and 1 or less a week are moderately

dependent in the relapse subdimension, whereas those who do not consume any fastfood are close to less dependent or even no dependence.

According to fastfood consumption frequency, the conflict subscale score was statistically significant ( $p = 0.001$ ;  $p < 0.01$ ). It was found statistically significant that the conflict score of fastfood consuming 1-3 times a day was 2-6 times a week compared to the group that consumed 1 or less and never a week ( $p = 0.001$ ;  $p < 0.01$ ). While those who consume fastfood 1-3 times a day and 2-6 times a week are less dependent on their conflict scores, those who do not consume 1 or less a week are not addictive.

BMI did not show statistically significant difference according to fastfood consumption frequency ( $p < 0.05$ ).

#### 4.2. The Summary of Positive Findings of Study

The hypotheses of our thesis are:

The aim of the study was to investigate whether social media addiction has a significant relationship between obesity and body perception in university students.

As a result of this hypothesis; There was no statistically significant relationship between body mass index and SMAS, and body perception scale ( $p > 0.05$ ).

Another hypothesis was if there is a significant relationship between social media addiction and body perception among university students. We have not found a significant relationship between BMI and body perception in university students ( $p > 0.05$ ).

Other statistically significant results of our study are as follows:

1. Nutrition and dietetics, physiotherapy and rehabilitation and nursing students were not highly addicted to social media according to the SMAS total scores. Nutrition and dietetics students, physical therapy and rehabilitation students are *moderately addicted* while nursing students are *less addicted* in the occupation subscale. University students are *less addicted* on social media according to the mood modification and relapse subscales. There is **no social media addiction** according to the conflict subscale of the students. There was no significant difference between the departments in terms of social media addiction.

2. The mean BMIs of the students in nutrition and dietetics was 21.16, physical therapy and rehabilitation 23.16 and nursing 21.56. BMI scores of the students studying in the physiotherapy department were higher than the other groups.
3. There was a statistically significant negative and low correlation between BPS and SMAS ( $r = -0.207$ ;  $p < 0.01$ ). There was a very low and negative correlation between BPS and occupation ( $r = -0.170$ ;  $p < 0.01$ ). A statistically significant negative correlation was found between BPS and mood modification ( $r = -0,195$ ;  $p < 0.01$ ). A statistically significant negative correlation was found between BPS and relapse ( $r = -0,134$ ;  $p < 0.05$ ). There was a statistically significant negative correlation between BPS and conflict ( $r = -0.201$ ;  $p < 0.01$ ).
4. Body mass index according to gender and social media addiction subscales did not show statistically significant difference ( $p > 0.05$ ). Men's BMI was higher than women ( $p = 0.001$ ;  $p < 0.01$ ).
5. The group using social media between 1-3 years was less addicted the occupation sub-dimension than the other groups ( $p = 0.001$ ;  $p < 0.01$ ). It was statistically significant that the mood adjustment dimension of the group whose social media usage period was 1-3 years was lower than the other groups ( $p = 0.001$ ;  $p < 0.01$ ). It was statistically significant that those who used 1-3 years of use were lower than the group whose social media dependency scale was 7 years or more ( $p = 0.001$ ;  $p < 0.01$ ).
6. Alcohol users have higher score than those who did not use in SMAS ( $p = 0.008$ ;  $p < 0.01$ ). Participants using alcohol were moderately dependent and participants who did not use alcohol are less dependent in this subscale
7. The mood modification scale scores of the participants were lower than those who did not exercise ( $p = 0,044$ ;  $p < 0.05$ ). It can be said that the score of those who do not exercise is close to moderate dependence (12.81), while those who exercise are less dependent than the mean score in the mood subscale
8. It was found statistically significant that BMI was higher in obese family members than those without obesity ( $p=0,012$ ;  $p < 0.05$ ).
9. It was found statistically significant that the patients with chronic disease have lower body perception than the patients wirthout chronic disease ( $p = 0,025$ ;  $p < 0.05$ ).

10. It was found statistically significant that those who had psychiatric disorders were higher than those who had no conflict subscale score. ( $p = 0.047$ ;  $p < 0.05$ ) While the participants without psychiatric disease were less dependent with the score of 32.4 in the conflict subscale, it was seen that the patients with psychiatric disease were moderately dependent in the conflict subscale with 37.29
11. It was found statistically significant that social media addiction scores of the people who skipped meals were higher than those who did not skip the meal ( $p = 0.027$ ;  $p < 0.05$ ). It was found statistically significant that occupation subscale scores of the people who skipped meals were higher than those who did not skip the meals. ( $p = 0.001$ ;  $p < 0.01$ )
12. SMAS showed a significant difference according to skipped meal type ( $p = 0.017$ ;  $p < 0.05$ ).
13. BPS showed a significant difference according to the frequency of fastfood nutrition ( $p = 0.004$ ;  $p < 0.01$ ).
14. According to fastfood feeding frequency, social media addiction scores differ significantly ( $p = 0.001$ ;  $p < 0.01$ ). According to fastfood feeding frequency, occupational subscale scores differed statistically ( $p = 0.007$ ;  $p < 0.01$ ). Mood modification subscale scores were significantly different according to fastfood feeding frequency ( $p = 0.002$ ;  $p < 0.01$ ). According to fastfood feeding frequency, relapse subscale scores showed statistically significant difference ( $p = 0.002$ ;  $p < 0.01$ ). According to fastfood feeding frequency, the conflict subscale score was statistically significant ( $p = 0.001$ ;  $p < 0.01$ ).

## 5. DISCUSSION AND CONCLUSION

### 5.1. Discussion

Firstly, the level of social media addiction of university students and the relationship between social media addiction and BMI and body perception were examined. Whether there is a difference according to the departments studied and their relationship with other findings were investigated.

Our study conducted with 248 university students which are a mean age of 21.4 studying in nutrition and dietetics department, physical therapy and rehabilitation department, nursing department, university students' social media addiction levels were found to be less addicted according to the SMAS. When the sub-scale addictions were examined, it was found that their occupation level was moderate, their addiction on mood modification was low, their relapse was low, and there was no addiction on conflict (no addiction level).

According to the results of the research, it is revealed that university students were not highly addicted to social media. There was no significant difference between the departments in terms of social media addiction.

When examining the subscales of the SMAS, nutrition and dietetics students, physical therapy and rehabilitation students are moderately addicted while nursing students are less addicted in the occupation subscale. According to this result, nursing students are less active in using social media applications and spending time in these applications compared to other department students. The reason why the students of the department of nutrition and dietetics and physiotherapy and rehabilitation spend more time on social media more than nurses may be considered as because the health and nutrition pages with their implementation such as online diet and exercise which are part of their profession find more place in social media. The lack of applicability of the nursing profession in these areas may have caused their occupation addiction to be lower than other departmental students.

University students are less addicted on social media according to the mood modification and relapse subscales. According to the students' conflict subscale score, even if they are near the less addiction level, they have no social media addiction. According to the



department, mood modification, relapse and conflict scales did not show statistically significant difference.

In a study conducted by Tutgun-Ünal with 1034 university students which are a mean age of 21.6 studying in various faculties in Istanbul (Faculty of Education, Faculty of Science and Literature, Faculty of Engineering, Faculty of Communication and Faculty of Nursing), university students' social media addiction levels were found to be less addicted. When the sub-scale addictions were examined, it was found that their occupation level was moderate, their addiction on mood modification was low, their relapse was low, and there was no addiction on conflict (no addiction level) (73). It can be said that the findings in this study are in parallel with our study.

In another study, it was concluded that the university students' repetition, conflict and total social media addictions were at a low level, and the level of occupation and mood regulation was moderate (106). According to the results of a study conducted in university students, the social media addiction levels of the students were said to be less addicted. In addition, the participants were said to have moderate dependence in terms of occupation, mood regulation, repetition behavior in social media, and low level of dependence in conflict behaviors (107). The results of the research are largely overlapping, and the difference can be thought to be due to the sample difference.

In another study, social media addiction of 472 high school students in Istanbul was investigated using SMAS in 2018. It was said that high school students were moderately addicted on social media based on the average scores obtained from the SMAS. When the average scores obtained from the subscales were examined, it was stated that high school students were moderately addicted on social media in terms of occupation and mood modification, and less addicted on social media in relapse and conflict dimensions (108). From this point of view, it was observed that the level of addiction did not change in the occupation and relapse sub-dimensions of high school students when they reached the university level; however, it can be seen that there may be decreases in the levels of dependence in the conflict, mood regulation sub-dimensions and in the levels of addiction in social media. It can be considered that high school students are engaged in different social activities and professional studies when it comes to university level as a reason.

When examining the relationship between BMI and Social media addiction, there was no statistically significant relationship between BMI and SMAS.

In the literature, there is no study examining the relationship between social media addiction and obesity. 1175 adolescents when taken in the context of a research conducted in Turkey, the prevalence of problematic Internet use among adolescent Internet users was found to be 7.1%, but there was no correlation between obesity with problematic Internet use (109). In another study, it was observed that there was no significant relationship between body mass indices and Internet addiction, loss of control, desire to stay online, and negativity in social relations (110). A study of 1140 people in Australia investigated the relationship between social media use and sitting time and BMI. However, study showed there is no associations between social media usage score and sitting to view TV, total sitting time or BMI or other leisure activities. This is in contrast to the assessment of sitting time caused by computer use, Internet use and TV watching which has been associated with increased BMI (100).

In a study on Internet addiction and obesity, it was found that there was no significant relationship between body mass indices and Internet addiction, loss of control, desire to stay online, and negativity in social relations (110).

In a study conducted in China in 2013, 1150 middle school students obesity 23.57%, Internet addiction 21.23% and obese students Internet addiction was found to be 21.06% and Internet addiction was found to be a risk factor for obesity (111).

In another study conducted in 2018, seven factors are considered as research model inputs. These are determined as children's healthy food intake, children's unhealthy food intake, family socio-economic status and family child-feeding behavior, children's social media use, children's physical activity and children's sleep amount. As a result, the outputs from this study demonstrate that increased daily use of social medias independently related with greater BMI levels for both primary and high school students (112). This connection has been confirmed in a number of present studies (113).

The lack of association between social media use and BMI may be due to the fact that it is difficult to detect social media use or that unlike TV sitting or computer using like online

gaming social media use is not associated with food consumption. It is also possible that people use the right information from the social media about healthy eating and exercise to have a positive effect on reducing BMI. Further research is needed to better determine the relationship between social media use and BMI.

When examining the relationship between body perception and social media addiction, there was a statistically significant negative and low correlation between BPS and SMAS. There was a very low and negative correlation between BPS and occupation statistically significant negative correlation was found between BPS and mood modification, relapse and conflict. According to the results of the analysis, body perception decreases as addiction increases in occupation, mood modification, conflict and relapse subscales. In other words, it is seen that people who can not give up using social media, want to use more, wonder what is happening, and use social media to forget their problems and to get rid of negative emotions have low body satisfaction.

It is predicted that excessive use of social media in addictive level and exposure to attractive, weak and fit body images in social media will increase the body dissatisfaction of social media users. In the literature, there is no study examining the relationship between social media addiction and body perception. There is some studies examined the relationship between social media or Internet use and body image or perception.

In a study conducted with India, presented that participants were not much concerned with their 'body image' and 'body weight', but they did imagine about the body structure of their idols (actors, athletes or social leaders) and desired to be like them. It may be assumed that the adolescent boys have disappointment with their body image possibly in their subconscious mind. Media would play a significant role in building up their body image and consequently their eating behavior (114).

In a research, the effect of attractive, famous or peer images on social media on the body image of women was investigated. The participants were 138 female university students with a BMI of 22.61 in the "normal weight" range. Participants were shown pictures of celebrities and peers in attractive clothes and peer images of normally dressed travelers. All images were taken from public Instagram profiles. The results showed that exposure to famous and peer images increased negative mood and body dissatisfaction compared to travel

images, and there was no significant difference between famous and peer images. It was concluded that exposure to attractive celebrity and peer images can be detrimental to women's body image (78). Comparable results were obtained in a similar study conducted in Australia (115).

In our study, it was seen that body satisfaction decreased as the desire to spend more time on social media and to follow what was happening on social media increased. The results offer support to general sociocultural models of effects on body image, and extend these to social media.

In our study, social media addiction did not differ according to gender. In most studies, males are more dependent on social media or Internet (116, 117), whereas there are some studies show that girls are more dependent (108). In other studies, no difference was found between the sexes (110, 118, 119). The results of the research should be in conflict when comparing social media addiction by gender.

When it was examined whether the BMI differed according to the duration of social media usage of the students, it was found that the duration of social media usage did not show a statistically significant difference compared to the BMI.

When social media addiction differed according to how long students use social media, it was found that the duration of social media usage showed statistically significant difference according to SMAS. It was found that those who use social media for more than 7 years are less dependent on social media than those who use less than 1 year and between 1-3 years.

In the study conducted by Tutgun-Ünal, it was indicated that the social media addiction of university students differed according to how long they used social media. It has been found that those who use social media for more than 4 years are less dependent on social media than those who use less than 1 year and 1-3 years (73).

When the subscales were examined, occupation and mood modification it has been found that social media addiction differs according to how long it has used social media. Accordingly, it was seen that those who use social media for more time have more social media addiction, engage with social media and receive more emotional support from social media than those who

use it for less time. In other words, people who use social media for more time have a desire to be more on social media, they think intensively what is going on there even if they are away from social media, they see their life as empty and boring without social media and they see social media as a place of escape from negativity in their lives and they received emotional support from the media.

On the other hand, in the conflict and repetition subscales, it was found that social media dependence did not differ according to how long it used social media. Accordingly, considering the differences in the dimension of occupation, it can be said that students who engage in social media too much or use it for a long time, regardless of how many years they have used social media, even if they impose restrictions on their use of social media, they use it in an increasing amount and experience conflicts. In other words, the fact that social media users have been engaged in social media for a long time also shows that their lives are accompanied by many negativities (professional / academic failure, relational problems) and yet they cannot break away from social media (repetition).

In another study, similar results were found with our study. In the study where Yildiz investigated the Internet addiction, it was said that there was a very weak correlation between the total score obtained from the scale and the year of Internet use, and that the total score increased as the year of Internet use increased (89).

When we examine relation between alcohol usage and social media addiction was found that alcohol users have higher score than those who did not use in SMAS. In the occupation subscale, alcohol users were moderately addicted and also their score higher than those who did not use alcohol. It can be said that alcohol users more active in social media than non alcohol users. It is found that while the participants using alcohol were moderately dependent in the mood modification subscale participants who did not use alcohol are less dependent. According to these results it can be said that alcohol users more often use social media to forget their problems, avoid negative thoughts and loneliness than the ones who do not use alcohol.

In a study, the total scale score average of Internet addiction of alcohol users was found to be significantly higher than the mean score of non-alcohol participants (89). Ko et al. (2018) reported that alcohol addiction and Internet addiction in adolescents were caused

by the same problematic tendency (120). In the study a total of 2,114 high school students were recruited to complete the questionnaire assessing Internet addiction, problematic alcohol use, and associated psychosocial variables. The result of study revealed that Internet addiction was associated with problematic alcohol use (120).

These results are in parallel with our study. The evolution of alcohol use to a problematic behavior dimension may be related to the fact that social media addiction can be a problematic behavior and attitude.

It was found statistically significant that the mood modification scale scores of the participants who do exercise were lower than those who did not exercise. It can be said that the score of those who do not exercise is close to moderate dependence, while those who exercise are less addicted than the mean score in the mood modification subscale. Accordingly, students who do not exercise use mostly social media to forget their personal problems, to get rid of negative thoughts when they are alone and overwhelmed by problems. In a study, it was found that interpersonal obstructive style and loneliness were more common among those with Internet addiction than those without Internet addiction (121).

An 11-week cognitive-behavioral treatment protocol was recommended by Davis for the treatment of Internet addiction. In this protocol, it was seen that taking part in sports activities and exercising (122). In one study, it was stated that smart phone addiction can be achieved with cognitive behavioral therapy and exercise therapy together with positive results İlk başta egzersiz rehabilitasyonunun fiziksel semptomları tedavi edebileceği, sonraki adımda güven, memnuniyet ve mutluluk hissi ile zihinsel problemlerin değişebileceği söylenir (123). Accordingly, it can be said that engaging in exercise and sports activities will be effective in avoiding the negative effects of social media and avoiding the expectation of help from social media emotionally as in our study.

In our study when the relationship between BMI and the presence of obese individuals between family members was examined, BMI values of participants with obese individuals in their families were found statistically significant to be higher than those without obese individuals in their families. In a study in which 6-18 years old children were admitted as a case group and normal weighted children were the control group, it was showed that the presence of obese individuals in the family, the weight and BMI values of both parents were

found to be statistically significant between the groups. Also it was said that if the parent is obese, the risk of their children being overweight between the ages of 3-10 is more than 75% and if the single parent is obese, this probability decreases to 25-50% (124).

In a study it was investigated the Family History of Obesity, Cardiovascular, and Metabolic Diseases Influence Onset and Severity of Childhood Obesity. 260 children, overweight or obesity, aged between 2 and 17 are participated in the study and blood samples were collected for clinical data, familial history for obesity and cardiometabolic diseases. It is found that BMI was positively associated with familial history for obesity and said that family history of obesity and cardiometabolic diseases are important risk factors for preobesity in childhood and are related to the severity of obesity (125).

In 2017 another study compared the change in adipokines in the circulation of normal-weighted persons whose parents were obese or having diabetes and those with normal-weighted parents who were not obese or non-diabetic. Participants of the study in the community-based Framingham Third Generation are chosen. Adipokines (leptin, LEP-R [leptin receptor], adiponectin, fetuin A, fatty acid binding protein 4 (FABP4), and retinol binding protein 4 (RBP4) are compounds which are released from adipose tissues to circulation and known to exhibit hereditary properties which are partially mediate the association between excess adiposity and hyperglycemia, hyperinsulinemia, sympathetic activity, inflammation, and vascular measure. It is said that Results of study show that offspring of parents with obesity was associated with higher serum levels of FABP4 and LEP-R and offspring of Parents with DM was associated with higher RBP4 concentrations (126).

In addition, the concept that emotion strongly influences eating, referred to as “Emotional Eating” (EE) was suggested that overeating by overweight individuals reduces anxiety and drives hyperphagia leading to obesity. A study which aims to understand relationship of EE between personal, psychological, and family history factors found that having a family history of obesity or anxiety, may put individuals at risk for EE (127).

It is stated in the literature that obesity is caused by complex interaction between genetic, metabolic and behavioral factors (35). Therefore, it can be said that both behavioral

and hereditary factors in the family may be a risk factor for the emergence of childhood and adolescent obesity in our study and in parallel results of other studies (128).

In our study, it was found statistically significant that the patients with chronic disease have lower body perception than the patients without chronic disease. It can be said that having chronic disease decreases body satisfaction. In our study, participants mostly have asthma, allergy, polycystic ovary syndrome and disorder of thyroid. In a study, said that women with polycystic ovary syndrome and menstrual irregularities had higher body dissatisfaction (129). In some studies many patients with chronic pain show distorted body images and chronic pain disorders appear to be associated with altered body perception (130, 131).

There is limited studies showing the relationship between having a chronic disease and body perception in the literature.

In our study it was found statistically significant that students who had psychiatric disorders were higher conflict subscale scores than those who had no psychiatric disorders. While the participants without psychiatric disease were less addicted in the conflict subscale, it was seen that the patients with psychiatric disease were moderately addicted in the conflict subscale. Dependency in the conflict sub-dimension defines neglecting family and friends, avoiding school and work related activities, facing problems in daily life and physically, keeping time spent on social media hidden, and increasing willingness to use social media. The students in our study stated that they mostly had anxiety, depression and obsessive compulsive disorder.

In a study that investigated the relationship between Internet addiction and anxiety of university students in Israel, it found a moderate positive relationship between Internet addiction and social anxiety in the general population (132). Adolescents with problematic Internet use in a study conducted in Turkey, it was said that anxiety, depression, and anxiety-depression scores were higher (109).

In the US 2014, 1749 participants aged 19 to 32 participated in a study measuring problematic social media use and depressive symptoms through an online survey. As a result



of the study, it was found that the prevalence of problematic social media use increased significantly in depressive symptoms (133).

In one study, it was stated that depressed individuals with low self-value may turn to use social media-based interactions for self-validation. Afterwards, individuals may feel guilty of their long Internet use because of having low Internet self-efficacy and negative self-assessments, and may be forced to continue this cycle (134). As an explanation, exposure to highly idealized representations of peers on social media may reveal jealousy feelings and skewed beliefs that others live happier and / or more successful lives. As a result, these jealous feelings can lead to feelings of self-humiliation and depression over time.

In our study 64.5% (n = 160) of the participants were skipping meals. While 58.9% (n = 93) of the participants skipped breakfast, 36.7% (n = 58) skipped lunch and 4.4% (n = 7) skipped dinner. In Turkey is conducted a study that evaluated with and some of the health risks of obesity with 488 female students living in university dormitories. It was found that 79.9 % of students skipped meals and it was reported that there was no statistically significant relationship between BMI and skipping and physical inactivity (135).

In our study it is show that BPS and BMI did not show statistically significant difference according to meal skipping status. In Japan, a study showed the skipping breakfast was closely associated with annual changes in BMI and WC among men. It was found that the annual change in BMI was higher in men who never ate breakfast or skipped four to six times a week than those who did not skip breakfast (136). In a study conducted in Egypt, the relationship between university students' Breakfast Skipping Relationships, Academic Performance and BMI was examined and it was found that the highest majority of students who skipped breakfast (57.8%) had low educational performance and nearly half of these students were overweight (137). However, in a Canadian study, adult reports show that skipping breakfast is not associated with the prevalence of obesity (138).

In our study, although the most frequently skipped meal was breakfast, there was no significant relationship between BMI. On the other hand, there was a statistically significant difference in BMI according to skipped meal type. BMI of the people who skipped dinner

was lower than those who skipped the other meals. When the literature was examined, it was observed that the researches focused on the skipping status of the meals and mostly skipping the breakfast. The relationship between skipping dinner and BMI can be thought to result of decrease of calorie intake and prolonged fasting time with sleep duration.

In our study, it was found statistically significant that social media addiction scores of the people who skipped meals were higher than those who did not skip the meal. According to the results, while the higher the social media addiction score, the higher the meal skipping level of the participants. It was found statistically significant that occupation, subscale scores of the people who skipped meals were higher than those who did not skip the meals. In a study examining Internet use and risky health behaviors heavy Internet use was correlated with multiple risk behaviors such as skipping meals and sleeping late as well as poorer health outcomes such as higher likelihood of being overweight or having hypersomnia (139). A study of Korean adolescents showed that children with high-risk Internet users have irregular diet behaviors due to loss of appetite, meal skipping frequency and frequent snacks consuming, which may lead to imbalance in dietary intake (140). One study showed that adolescents who played computer games 4 days a week or more increased the frequency of skipping meals, and at the same time increased the speed of eating to play computer games or watch television (141).

Studies were generally conducted on watching television, using computers and playing computer games, and no studies were conducted between social media and skipping meals. According to our study results, it can be said that irregular nutrition behaviors that may adversely affect health may arise due to the use of social media for the purpose of video watching and playing online games.

In our study, it was found body perception scale showed a significant difference according to the frequency of fastfood nutrition. In other words, body satisfaction of students who had no fast food consumption was found to be higher than those of fast consumption. In one study, it was accept that there are effects of fast food consumption on body image,guilt and shame (142). In a study conducted with adolesants showed that high frequency of eating pasta and fast-food consumption were independently associated with under-estimated body image(128).

In our study, it was found that according to fastfood consumption frequency, social media addiction scores differ significantly. Those who consumed fastfood 1-3 times a day were moderately dependent on the social media addiction score, while the other groups were less addicted. It can be said that the score obtained from the group that does not consume any fastfood is close to the state of no addiction. According to these results, fast food consumption increases as social media addiction increases.

According to fastfood consumption frequency, occupational subscale scores differed statistically. Mood modification subscale scores were significantly different according to fastfood feeding frequency. According to fastfood feeding frequency, relapse subscale scores showed statistically significant difference and the conflict subscale score was statistically significant.

In a research conducted with 2350 Turkish university students, it was found that students with Internet addiction had a significantly higher rate of consuming fastfood than those without Internet addiction and the frequency of fastfood consumption was found to be 21.7% per day, 40.4% per week, and 16.5% per month (143). Results of this study are in parallel with our study. In our study while 6.9% (n = 17) of the participants were fed fastfood 1-3 times a day, 27.9% (n = 69) were 2-6 times a week and 57.1% (n = 141) once a week and less and 8.1% (n = 20) do not consume any fast food.

In a study conducted with Korean adolescents, it was found that the favorite snacks of the participants were sweets and fast food, which are nutritionally poor foods including fats and simple sugar with high calories. It also found that high-risk Internet users consumed fatty foods, fried foods, salt, and foods high in simple sugars more than the recommended daily quantities and consumed too little of the healthy food groups (140). In another study conducted in university students, Internet addiction was evaluated according to the nutrients consumed in the snacks. It was found that the average score of Internet addiction scale of biscuit candy chocolate, french fries snackers and frequent fastfood eaters was higher than those who consume healthy foods such as fruit, milk and yogurt (89). In one research found that middle school students with Internet addiction had a significantly higher rate of obesity than those without Internet addiction. This research also said that Internet addicts often have

an irregular diet, eat snacks instead of regular meals, drink nutritional beverage and found that middle school students with greasy snack eating, had a higher rate of obesity (111).

Moreover, in one study it was said that too much advertising of unhealthy foods like fast food and sugar sweetened drinks through new technologies may affect the enlarged consumption of these foods between different generations, especially in children and youth(144). Studies have shown that Internet addiction can have negative effects on eating disorders and diet patterns (145, 146).

As in the results of our study, previous studies are positively related to Internet addiction and social media use, skipping meals, disordered eating habits, unhealthy snack habit and fastfood consumption. It can be said that these results will be meaningful when the time spent on computer and social media, meals are skipped with fast food consumption and fast food advertisements on the web pages are considered.

## 5.2. Conclusion and Recommendations

The increasing prevalence of Internet technologies and social media applications in the 21st century leads to people using these tools more, facilitating life, providing communication facilities, creating personal profiles on online platforms and being dependent on social media with their psychological effects.

Considering the increasing incidence of skipping meal, fastfood consumption, inadequate and unbalanced nutrition disorders in today's young people, it is important to investigate the relationship between social media use and obesity and body perception.

Our research is the first study to examine the association between obesity and social media addiction in Turkey.

In our study, the BMI value was in the normal range. The reason for this may be the presence of nutrition and dietetics students expected to be conscious about nutrition among the participants and physiotherapy and rehabilitation students with exercise awareness.

As a result of our study, although there was no significant relationship between BMI and social media addiction, in our study population it was found that university students were not highly dependent on social media. In addition it was seen that those who use social media in years receive more emotional support from social media, more time have a desire to be more on social media, they think intensively what is going on there even if they are away from social media, they see their life as empty and boring without social media and they see social media as a place of escape from negativity in their lives. Although the addiction situation has been found to be low, the increasing use of social media applications and usage shows that social media addiction should be seen as an important problem.

There is a significant relationship between social media addiction and body perception among university students. According to the results of the study, it can be said that the use of social media at addiction level and exposure to attractive, thin and fit body images in social media increase the body dissatisfaction of social media users. The results offer support to general sociocultural models of effects on body image, and extend these to social media.

In our study, it was found that alcohol use was associated with social media addiction. The evolution of alcohol use to a problematic behavior dimension may be related to the fact that social media addiction can be a problematic behavior and attitude.

It was found that people with high social media addiction skipped more meals and consumed fast food more frequently. It can be said that these results will be meaningful when the time spent on computer and social media, decrease in activity, meals are skipped with fast food consumption and fast food advertisements on the web pages are considered.

Although studies focus relationship between Internet addiction, Facebook addiction and obesity, Internet use and eating disorder, there are limitations on issues related to social media addiction, nutrition and obesity. Some problems caused by social media addiction are related to the theory of psychological, environmental and behavioral formation of obesity such as insomnia, sedentary lifestyle, body perception disorder, fast food nutrition frequency increase, snack habit increase, alcohol use increase.

The findings obtained in the research are limited to the answers given to the Social Media Addiction Scale, Body Perception Scale, and Personal Information Form. This research reflects the knowledge, perception and thoughts of the interviewed students within the timeframe they responded and does not have the opportunity to determine the changes that may occur over time. The fact that the participants were students of nutrition and dietetics, physiotherapy and rehabilitation, and nursing department and the low number of male students in these departments may have affected the results related to gender differentiation in the analyzes. In such a limitation, excluding male students or choosing the sample from different faculties whose gender distribution is equivalent may be more useful for future studies.

In this study, meaningful data were obtained on these subjects and it was tried to contribute to the literature. It is thought that our study will shed light on future studies and further studies are needed in this field.

## Recommendations;

- Considering the results of the research, it would be informative and preventive for adolescents to take seminars on how to use the Internet efficiently, safely and healthily at secondary and primary levels before reaching university level.
- It is important to develop preventive interventions for young people in terms of social media addiction. Given the rapid spread of cyber bullying that can lead to psychological problems in young people, families should be informed about the healthy and pathological uses of the Internet, and the control of the family for the use of social media at a young age should be ensured and families should be included in preventive methods.
- Considering that social media could be used to gain information and change behavior in a positive way as a member of behavior change groups, instead of limiting the use of social media to prevent from negative usage and producing solutions, students can be assisted in how they can use social media more efficiently.
- When the relationship between body perception and social media addiction is taken into consideration, individual and group studies can be conducted by school psychological counselors in order to ensure that body perception of young people is not affected negatively by fashion trends in social media and that body perception is developed in the right direction.
- Families should take precautionary measures about their children's social media and Internet addiction at an early age and direct the youth's energy to more sporting and artistic activities.
- In order to gain healthy eating habits in young people; the time of the meal should be certain. Therefore, young people should be more sensitive to not eating in front of the screen and gaining proper nutrition habits.

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## 7. APPENDICES

### Appendix 1. Etik Kurul Onayı



T.C. YEDİTEPE ÜNİVERSİTESİ

**Sayı :** 37068608-6100-15- 1655  
**Konu:** Klinik Araştırmalar  
Etik kurul Başvurusu hk.

**28/03/2019**

**İlgili Makama (Seda Çakmak)**

Yeditepe Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı Doç. Dr. Özlem Tanrıöver'in sorumlu olduğu "**Üniversite Öğrencilerinde Sosyal Medya Bağımlılığının Obezite ve Beden Algısı ile İlişkisinin İncelenmesi**" isimli araştırma projesine ait Klinik Araştırmalar Etik Kurulu (KAEK) Başvuru Dosyası ( **1623** kayıt Numaralı KAEK Başvuru Dosyası ), Yeditepe Üniversitesi Klinik Araştırmalar Etik Kurulu tarafından **27.03.2019** tarihli toplantıda incelenmiştir.

Kurul tarafından yapılan inceleme sonucu, yukarıdaki isimi belirtilen çalışmanın yapılmasının etik ve bilimsel açıdan uygun olduğuna karar verilmiştir ( **KAEK Karar No: 1007** ).

  
Prof. Dr. Turgay ÇELİK  
Yeditepe Üniversitesi  
Klinik Araştırmalar Etik Kurulu Başkanı

## Appendix 2. Anket Formu

Bu çalışma, Yeditepe Üniversitesi öğrencilerinde obezite oluşumunda sosyal medya bağımlılığının etkisinin saptanması amacıyla yapılan uzmanlık tezi için hazırlanmıştır. Dolduracağınız anket formundaki bilgiler sadece bu çalışmada kullanılacak ve saklı tutulacaktır. Soruları eksiksiz ve dikkatli doldurmanız çalışmanın doğru sonuçlanması için önemli olup, göstereceğiniz dikkat ve ayırmış olduğunuz zaman için teşekkür ederiz.

Dyt. Seda Çakmak Doç. Dr. Özlem Tanrıöver

1. Öğrenim Gördüğünüz Bölüm: .....
2. Cinsiyetiniz: ( ) Kadın ( ) Erkek
3. Yaşınız: .....  
Boy: ... cm Kilo: ... kg
4. Öğrenim Gördüğünüz Sınıf: (1) (2) (3) (4)
5. Medeni Durumunuz? a) Bekar b) Evli
6. Nerede kalıyorsunuz?  
a) Ailemin yanında evde b) Yurtta c) Arkadaşlarımla beraber evde d) Evde tek başına e) Diğer.....
7. Ekonomik durumunuzu nasıl buluyorsunuz?  
a) Çok iyi b) İyi c) Orta d) Kötü e) Çok kötü
8. Sosyal medya kullanıyor musunuz? ( ) Evet ( ) Hayır
9. Sosyal medya uygulamalarından hangilerini kullanıyorsunuz?  
( ) Facebook ( ) Google +  
( ) Twitter ( ) LinkedIn  
( ) Instagram ( ) Tumblr  
( ) Foursquare ( ) Youtube  
( ) Pinterest ( ) Snapchat  
( ) Diğer yazınız.....
10. Sosyal medya uygulamalarına hangi cihaz türlerinden erişiyorsunuz?  
( ) Sadece Masaüstü Bilgisayar  
( ) Masaüstü ve Mobil Cihazlar (laptop, tablet, akıllı telefon)  
( ) Sadece Mobil Cihazlar (laptop, tablet, akıllı telefon)

11. Sosyal medyayı ne kadar süredir kullanıyorsunuz?  
( ) 1 yıldan az ( ) 1-3 yıl arası ( ) 4-6 yıl arası ( ) 7 yıl ve üstü
12. Günde ortalama kaç saatinizi sosyal medyada geçiriyorsunuz?  
( ) 1 saatten az ( ) 1-3 saat arası ( ) 4-6 saat arası ( ) 7 saat ve üstü
13. Sosyal medyada sağlık, sağlıklı yaşam ve beslenme ilgili önerilerin olduğu sayfaları/ sosyal medya hesaplarını takip ediyor musunuz? Yanıtınız 'hayır' ise 15. Soruya geçebilirsiniz.  
a) Evet b) Hayır
14. Yanıtınız evet ise bu hesaplardan/sayfalardan edindiğiniz bilgileri hayatınıza uyguluyor musunuz?  
a) Uyguluyorum c) Kısmen Uyguluyorum b) Uygulamıyorum
15. Sigara içiyor musunuz? a) Evet b) Hayır c)  
Bıraktım
16. Sigara içiyorsanız günde kaç tane ve kaç yıldır? ...adet/gün ...yıl
17. Alkol kullanıyor musunuz? a) Evet b) Hayır c)  
Bıraktım
18. Alkol kullanıyorsanız bir haftada ne kadar kullanıyorsunuz? ...bardak/hafta
19. Düzenli egzersiz yapıyor musunuz? a)Evet b)Hayır
20. Düzenli egzersiz yapıyorsanız, haftada kaç gün ve ortalama kaç dakika yapıyorsunuz?  
...gün/haftada ...dk /gün
21. Yaptığınız düzenli egzersiz türü nedir? a) Yürüyüş b) Koşu c) Yüzme  
d) Pilates e) Fitness f) Diğer
22. Ailenizde şişman birey var mı? a) Evet b)Hayır
23. Kronik hastalığınız var mı? a) Evet (hangi hastalık?)... b) Hayır
24. İlaç kullanıyor musunuz? a) Evet (hangi ilaç?)... b) Hayır
25. Psikiyatrik hastalığınız var mı? a) Evet (hangi hastalık?)... b) Hayır
26. Günde kaç öğün besleniyorsunuz? ...öğün/gün
27. Öğün atlıyor musunuz? a) Evet b) Hayır
28. Cevabınız evet ise hangi öğünü atlıyorsunuz?  
a) Kahvaltı b) Öğle yemeği c) Akşam yemeği

29. Fastfood beslenme sıklığınız nedir?

- a) Günde 1-3 defa      b) Haftada 2-6 defa      c) Haftada 1 veya daha az      d) Hiç tüketmiyorum

30. Ara öğünlerde neler atıştırıyorsunuz? Birden fazla şıkkı işaretleyebilirsiniz.

- a) Atıştırma alışkanlığım yoktur      b) Bisküvi, çikolata, şeker      c) Patates kızartması  
d) Hamburger, sosisli ve benzeri ekmek arası sandviç      e) Kuruyemiş  
f) Meyve      g) Salatalık, havuç benzeri sebzeler, salata      h) Yoğurt, süt, kefir  
Diğer (lütfen yazınız) ...

31. Nasıl besleniyorsunuz?

- a) Sebze-meyve ağırlıklı  
b) Et ağırlıklı  
c) Fastfood  
d) Süt ve süt ürünleri ağırlıklı  
e) Tahıl ağırlıklı (ekmek, pilav, makarna, şehriye, un ve undan yapılan yiyecekler)  
f) Diğer (lütfen yazınız) ...

32. Gün içinde iş ve okul zamanı dışındaki sürede, ortalama kaç saatinizi televizyon seyretmek, bilgisayar kullanmak, film izlemek, kitap okumak, internette gezmek, bilgisayar oyunları oynamak için harcıyorsunuz? ...saat/gün



### Appendix 3. Sosyal Medya Bağımlılığı Ölçeği Formu

Madde No		Hiçbir zaman	Nadiren	Bazen	Sık sık	Her zaman
1	Yakın zamanda sosyal medyada neler olup bittiği hakkında oldukça fazla düşünürüm.					
2	Yapmam gereken bir iş varsa öncesinde sosyal medyayı kontrol ederim.					
3	Belli süre sosyal medyaya girmediğimde sosyal medyaya girme düşüncesi zihnimi meşgul eder.					
4	Hayatımın sosyal medya olmadan sıkıcı, boş ve zevksiz olacağını düşünürüm.					
5	İnternete bağlı değilken yoğun bir şekilde sosyal medyaya girmeyi düşünürüm.					
6	Sosyal medyada neler olup bittiğini merak ederim.					
7	Sosyal medyada düşündüğümden daha fazla zaman geçirdiğim olur.					
8	Sosyal medya ile bağlantımı kesmeye her karar verdiğimde kendi kendime “birkaç dakika daha” derim.					
9	Sosyal medyayı uzun süre kullanmaktan bir türlü vazgeçemem.					
10	Sosyal medyayı, planladığımdan daha fazla kullandığım olur.					
11	Sosyal medyayı kullanırken zamanın nasıl geçtiğini anlayamam.					
12	Sosyal medya ile ilgili eylemlere (oyun, sohbet, fotoğraflara bakmak, vs) uzun süreler ayırırım.					
13	Kişisel problemlerimi unutmak için sosyal medya kullanırım.					
14	Kendimi yalnız hissettiğim zamanlarda sosyal medyada vakit geçiririm.					
15	Yaşamımdaki olumsuz düşüncelerden kurtulmak için sosyal medyada gezinmeyi tercih ederim.					
16	Problemlerimden bunaldığımda sığındığım en iyi yer sosyal medyadır.					
17	Sosyal medya kullandığım süre boyunca her şeyi unuturum.					
18	Sosyal medya kullanımını durdurmaya çalışıp başaramadığım olur.					
19	Sosyal medya kullanımını denetim altına almak için yoğun bir istek duyarım.					
20	Sosyal medya kullanımını bırakmak için sonuç vermeyen çabalar gösteririm.					
21	Sosyal medya kullanımını denetim altına almak için sonuç vermeyen çabalar gösteririm.					
22	Sosyal medyada harcadığım zamanı azaltmaya çalışır, başarısız olurum.					
23	Mesleğime/çalışmalarına olumsuz bir etki yapmasına rağmen sosyal medyayı daha fazla kullanırım.					
24	Sosyal medyadan dolayı hobilerime, boş zaman ve dinlenme faaliyetlerime daha az öncelik veririm.					
25	Eş veya aile üyelerini sosyal medyadan dolayı ihmal ettiğim olur.					
26	Arkadaşlarımı sosyal medyadan dolayı ihmal ettiğim olur.					

Madde No		Hiçbir zaman	Nadiren	Bazen	Sık sık	Her zaman
27	Sosyal medya dolayısıyla başladığım aktiviteleri zamanında bitiremem.					
28	Sosyal medyada daha fazla zaman geçirmek için okulla veya işle ilgili çalışmalarını ihmal ederim.					
29	Sosyal medyada zaman geçirmeyi, arkadaşlarımla zaman geçirmeye tercih ederim.					
30	Sosyal medyada geçirdiğim zaman yüzünden okul çalışmalarım ya da işlerim sekteye uğrar.					
31	Sosyal medya yüzünden üretkenliğim azalır.					
32	Sosyal medyada zaman geçirmeyi, arkadaşlarımla dışarı çıkmaya tercih ederim.					
33	İnsanlar sosyal medyada geçirdiğim zamanın miktarını konusunda beni eleştirirler.					
34	Kendimi sosyal medyada ne kadar süre gezindiğimi saklamaya çalışırken bulurum.					
35	Sosyal medya yüzünden yemek yemeyi unuttuğum zamanlar olur.					
36	Sosyal medya kullanımını yüzünden kişisel bakımına daha az vakit ayırdığım olur.					
37	Sosyal medya kullanımını yüzünden uyku düzenimde değişiklikler/bozukluklar olur.					
38	Sosyal medya kullanımını yüzünden fiziksel sorunlar (sırt, baş, göz ağrıları, vb) yaşadığım olur.					
39	Sosyal medya kullanımını benim için önemli kişilerle olan ilişkilerimde problem yaşamama neden olur.					
40	Sosyal medya kullanımım yaşamımda sorunlar oluşturur.					
41	Yapmam gereken işler çoğaldıkça, sosyal medya kullanma isteğim de o ölçüde artar.					

#### Appendix 4. Evaluation of Social Media Addiction Scale

**Table. 1: Evaluation of Social Media Addiction Scale and Sub-Scales**

Sub Scale / Scale	Score Range	Addiction Level
Occupation	12-21	No addiction
	22-31	Less addiction
	32-41	Moderately addiction
	42-51	Highly addiction
	52-60	Very high addiction
Mood Modification	5-8	No addiction
	9-12	Less addiction
	13-16	Moderately addiction
	17-20	Highly addiction
	21-25	Very high addiction
Relapse	5-8	No addiction
	9-12	Less addiction
	13-16	Moderately addiction
	17-20	Highly addiction
	21-25	Very high addiction
Conflict	19-33	No addiction
	34-48	Less addiction
	49-63	Moderately addiction
	64-78	Highly addiction
	79-95	Very high addiction
SMAS	41-73	No addiction
	74-106	Less addiction
	107-139	Moderately addiction
	140-172	Highly addiction
	173-205	Very high addiction

## Appendix 5. Beden Algısı Ölçeđi

Ařađıda çeřitli vücut özellikleri ve beğenip beğenmeme ifadeleri bulunmaktadır. Yapmanız gereken, bir vücut özelliđiniz hakkındaki duygularınızı bu ifadelere göre deđerlendirmektir. Örneđin bir vücut özelliđinizi çok beğeniyorsanız, bu özellik için “çok beğeniyorum” ifadesinin bulunduđu kutuya “X” işreti koyunuz.

	Çok beğeniyorum	Oldukça beğeniyorum	Kararsızım	Pek beğenmiyorum	Hiç beğenmiyorum
1. Saçlarım					
2. Yüzümün rengi					
3. İřtahım					
4. Ellerim					
5. Vücutumdaki kıl dađılımı					
6. Burnum					
7. Fiziksel gücüm					
8. İdrar – dışkı düzenim					
9. Kas kuvvetim					
10. Belim					
11. Enerji düzeyim					
12. Sırtım					
13. Kulaklarım					
14. Yaşım					
15. Çenem					
16. Vücut yapım					
17. Profilim					

	<b>Çok beğeniyorum</b>	<b>Oldukça beğeniyorum</b>	<b>Kararsızım</b>	<b>Pek beğenmiyorum</b>	<b>Hiç beğenmiyorum</b>
18. Boyum					
19. Duyularımın keskinliği					
20. Ağrıya dayanıklılığım					
21. Omuzlarımın genişliği					
22. Kollarım					
23. Göğüslerim					
24. Gözlerimin şekli					
25. Sindirim sistemim					
26. Kalçalarım					
27. Hastalığa direncim					
28. Bacaklarım					
29. Dişlerimin şekli					
30. Cinsel gücüm					
31. Ayaklarım					
32. Uyku düzenim					
33. Sesim					
34. Sağlığım					
35. Cinsel faaliyetlerim					
36. Dizlerim					
37. Vücudumun duruş şekli					
38. Yüzümün şekli					
39. Kilom					

40. Cinsel orgalarım					
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## CURRICULUM VITAE

### Personal Information

<b>Name</b>	Seda	<b>Surname</b>	Çakmak
<b>Place of Birth</b>	Beşiktaş	<b>Date of Birth</b>	10.03.1993
<b>Nationality</b>	T.C.	<b>ID No:</b>	55099540456
<b>E-mail</b>	sedacakmak@maltepe.edu.tr	<b>Telephone</b>	0 534 729 28 03

### Education Status

<b>Degree</b>	<b>Department</b>	<b>Name of the Schools</b>	<b>Year of Graduation</b>
<b>Postgraduate</b>	Department of Nutrition and Dietetics	Yeditepe Üniversitesi	2017- Now
<b>Undergraduate</b>	Gastronomy and Culinary Arts	Yeditepe Üniversitesi	2014-2018
<b>Undergraduate</b>	Nutrition and Dietetics	Yeditepe University	2013-2017

<b>Foreign Languages</b>	<b>Language Scores</b>
English (YÖKDİL)	86,25
English (YDS)	68,75

### Working Experience

<b>Job</b>	<b>İnstitution</b>	<b>Duration (Year - Year)</b>
Research Assistant	Maltepe University	2019- Now

### Computer Knowledge

<b>Program</b>	<b>Usage</b>
Microsoft Office	Very good
SPSS	Moderate

